

EXHIBIT 13

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF NEW YORK

UNITED STATES OF AMERICA,
THE STATE OF NEW YORK,

Plaintiffs,

v.

HOOKER CHEMICALS & PLASTICS CORP.;
OXY CHEMICAL CORPORATION; HOOKER
CHEMICAL CORPORATION; OCCIDENTAL
PETROLEUM INVESTMENT CO.; OCCIDENTAL
PETROLEUM CORPORATION; THE TOWN OF
LEWISTON; THE TOWN OF NIAGARA,
(Hyde Park Landfill)

Defendants.

Civil Action No. 79-989

STIPULATION AND JUDGMENT
APPROVING SETTLEMENT AGREEMENT

January 19, 1981

CRA 4-0001753

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IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF NEW YORK

UNITED STATES OF AMERICA,
THE STATE OF NEW YORK,

Plaintiffs,

v.

HOOKEER CHEMICALS & PLASTICS CORP.;
OXY CHEMICAL CORPORATION; HOOKEER
CHEMICAL CORPORATION; OCCIDENTAL
PETROLEUM INVESTMENT CO.; OCCIDENTAL
PETROLEUM CORPORATION; THE TOWN OF
LEWISTON; THE TOWN OF NIAGARA,
(Hyde Park Landfill)

Defendants.

Civil Action No. 79-989

STIPULATION AND JUDGMENT
APPROVING SETTLEMENT AGREEMENT

The undersigned, having agreed and stipulated that a judgment can be entered in this action incorporating a settlement agreement containing the following terms and conditions, and the Court having reviewed such terms and conditions, and having determined that they are reasonable and adequate to resolve the issues raised in this action and constitute appropriate programs, using requisite remedial technology, to restore and protect the environment and are designed to protect against endangerment to human health or the environment in and about the Hyde Park Landfill and the Bloody Run drainage area, and the Court being fully advised in the

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the State of New York (hereinafter "Hooker");

(d) Defendant Oxy Chemical Corporation, a corporation organized and existing under the laws of the State of California;

(e) Defendant Hooker Chemical Corporation, a corporation organized and existing under the laws of the State of California;

(f) Defendant Occidental Petroleum Investment Co., a corporation organized and existing under the laws of the State of California;

(g) Defendant Occidental Petroleum Corporation, a corporation organized and existing under the laws of the State of California (hereinafter "Occidental");

(h) Defendant Town of Lewiston; and

(i) Defendant Town of Niagara.

2. (a) The Hyde Park Landfill Site (hereinafter "Landfill Site"), shown in Figure 1, is owned by Hooker and is located in an industrial complex in the extreme northwest corner of the Town of Niagara, New York. It is bounded on the north by the boundary line between the Towns of Niagara and Lewiston, on the east by undeveloped property, on the south by property and facilities owned by TAM Ceramics, Inc., and on the west by property and facilities owned by Niagara Steel Finishing Company, Home Oil Company, and a monument works owned by the Paonessa family. The Landfill Site,

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roughly triangular in shape, occupies approximately 15 acres. Based on presently-available geologic data, the Landfill Site is located in an area having the following stratigraphy from the top down:

(i) overburden, which ranges in depth from approximately four feet on the eastern end of the Landfill Site to a depth of approximately 28 feet on the western end of the Landfill Site and which consists of sand, silt, clays, and glacial till deposits (hereinafter "Overburden");

(ii) weathered rock, which ranges in thickness from approximately two feet on the eastern end of the Landfill Site to approximately six feet on the western end of the Landfill Site consisting of partially decomposed rock in a matrix of silty clay (hereinafter "Weathered Zone");

(iii) Lockport Dolomite bedrock, which is approximately 100 feet thick, consisting of massive to thin-bedded dolomite (hereinafter "Lockport Bedrock Zone"); and

(iv) continuing bedrock units of the Silurian and older geologic ages including the Rochester shale formation (hereinafter "Rochester Shale Zone").

(b) Groundwater at the Landfill Site occurs in both the Overburden and the Lockport Bedrock Zone. In

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the Overburden, groundwater occurs in the spaces between individual grains of the soil; in the Lockport Bedrock Zone, groundwater occurs in fractures or joints which are parallel to the bedding planes, in other fractures or joints which cut across the bedding planes approximately at right angles to the bedding, and in cavities formed by the solution of minerals from the rock. Groundwater movement in these zones is generally toward the Niagara River Gorge, although there may be some local deviations due to anomalous patterns of permeability.

(c) Surface water from the Landfill Site drains to a creek, locally known as Bloody Run, which is culverted at New Road near the Niagara-Lewiston boundary, flows above ground for a short distance and then passes through a storm sewer beneath the Greif Bros., Inc.'s barrel plant. Bloody Run then flows past a few private residences in an open channel and through culverts at Sherman Avenue, Belvedere Avenue, and University Drive until it enters the storm sewer at University Drive; it then runs west to the Niagara Gorge, where it eventually empties into the Niagara River. The Landfill Site, the Bloody Run drainage area discussed herein, areas adjacent thereto, and that portion of the Niagara River into which Bloody Run empties, as shown on Figure 1, shall hereinafter be collectively referred to as "Hyde Park - Bloody Run Area."

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3. (a) The complaint of the United States in this action was filed December 20, 1979. The answer thereto was filed May 19, 1980. The complaint sets out EPA's allegations and the answer sets out Hooker's responses thereto. On June 11, 1980, pursuant to a motion by Hooker, the Court ordered the Towns of Lewiston and Niagara and the State joined as defendants in this action. The answer of the Town of Lewiston was filed on July 7, 1980. The answer and cross-claim of the Town of Niagara were filed on July 8, 1980. On September 11, 1980, the Court granted the State's motion to realign itself as a plaintiff. The complaint of the State of New York in this action was filed on November 18, 1980. The answer thereto was filed January 8, 1981.

(b) In order to resolve this matter constructively, to avoid prolonged litigation, to permit expeditious implementation of the activities described herein, and to further the public interest, Occidental, Hooker, EPA, the State and the other parties hereto have agreed to forego their respective claims, allegations, responses and defenses and to enter into this Stipulation and Judgment Approving Settlement Agreement (hereinafter "Judgment").

4. (a) The containment, monitoring, and maintenance programs described in this Judgment have been designed, and have as a goal, to protect against endangerment to human health and the environment in the Hyde Park - Bloody Run Area

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utilizing Requisite Remedial Technology to achieve the purposes set forth in this Judgment. As used in this Judgment, "Remedial Technology" refers to engineering and construction practices used or accepted for use in landfill containment projects or other industrial projects which are applicable to the materials and hydrogeologic conditions found at the Landfill Site.

(b) In determining whether a Remedial Technology is "Requisite," consideration shall be given by the parties to the following factors: the nature of the endangerment to human health and the environment which the Remedial Technology is designed to address; the extent to which application of the Remedial Technology would reduce such endangerment to human health or the environment or would otherwise benefit human health or the environment; and the economic costs required to apply the Remedial Technology.

(c) Hooker shall be required to apply the Requisite Remedial Technology proposed by EPA/State in accordance with the terms and conditions of this Judgment, unless, upon the evidence, the Court determines:

(i) that application of such technology is unnecessary to satisfy the goal described in subparagraph (a); or

(ii) that, considering the factors described in subparagraphs (a) and (b), it would be arbitrary and capricious to require Hooker to bear the economic

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costs incurred in applying such technology.

(d) Any judicial review concerning the definition or application of Requisite Remedial Technology pursuant to this Judgment shall be based on the standards and considerations described in this paragraph.

JUDGMENT

5. Neither this Judgment nor any part hereof shall constitute an admission of law or fact or evidence of same, nor of any violation of any law or regulation. The parties hereto may rely upon this Judgment only in this action or in another action or proceeding concerning the Hyde Park - Bloody Run Area. The parties hereto may not rely upon this Judgment in any other action or proceeding. It is intended that this Judgment shall neither create nor affect the rights of persons or entities who are not parties to this action.

CONTAINMENT, MONITORING AND MAINTENANCE PROGRAMS

6. (a) Hooker shall implement the containment program set out in Addendum I (hereinafter "Containment Program"), the monitoring program set out in Addendum II (hereinafter "Monitoring Program"), and the maintenance program set out in Addendum III (hereinafter "Maintenance Program"), in accordance with the terms and conditions of

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this Judgment. During construction activities associated with the Containment Program, Hooker shall also implement the environmental health and safety plan set out in Addendum V (hereinafter "Safety Plan"), in accordance with the terms and conditions of this Judgment.

(b) Within 60 days following the effective date of this Judgment, Hooker shall submit to EPA/State a plan ^{A-4} containing a proposed schedule to initiate and complete each activity described in Addenda I, II and III of this Judgment. The schedule shall reflect Hooker's best efforts to initiate and complete expeditiously all such activities; provided, however, that the schedule shall require that the activities described in the subparagraphs set out below shall be initiated within 120 days after the effective date of this Judgment and shall be completed as follows:

<u>Activity</u>	<u>Schedule Completion Date</u>
As described in subparagraphs B(1)(a)-(c)(iv) and G(1)(a)-(c) ^{or H(1)(a)-(c) of Addendum I} <i>See Addendum I - H/ - BR</i>	no later <u>than 300 days</u> after plans, specifications and protocols required for such activities are deemed consistent with all appropriate terms and conditions of the Judgment pursuant to the provisions of Paragraph 7. <i>C-5 #14</i>
As described in subparagraph C(1)-(7)(a) of Addendum I <i>Amend I</i>	no later <u>than 360 days</u> after plans, specifications and protocols required for such activities are deemed consistent with all appropriate terms and conditions of the Judgment pursuant to the provisions of Paragraph 7. <i>G-5</i>

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(c) EPA/State shall review the schedule submitted pursuant to subparagraph (b) and advise Hooker in writing, within 30 days after receipt, if EPA/State considers the schedule inconsistent with any appropriate term and condition of this Judgment. If EPA/State so advises Hooker, any such party may petition the Court within 30 days thereafter to determine whether the schedule is consistent with all appropriate terms and conditions of this Judgment and, if not, to establish a schedule consistent with all appropriate terms and conditions of this Judgment.

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(A-6)

(d) The schedule described in subparagraph (b) or (c) shall be deemed consistent with all appropriate terms and conditions of this Judgment, incorporated by reference into this Judgment, and filed with the Court three working days after any of the following occurs:

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(i) Hooker has made the submission pursuant to subparagraph (b) and EPA/State has not notified Hooker on a timely basis pursuant to subparagraph (c);

(ii) Hooker, EPA, and the State file with this Court a stipulation to such effect; or

(iii) the Court makes a final determination that the schedule is consistent with all appropriate terms and conditions of this Judgment.

(e) At any time following filing of the schedule pursuant to subparagraph (d), such schedule may be

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modified by stipulation of EPA/State and Hooker or by order of the Court.

(f) At least 60 days prior to the date on which such schedule requires an activity to be initiated, Hooker shall submit to EPA/State plans, specifications and protocols for such activity; provided, however, that plans, specifications and protocols for activities required to be initiated less than 150 days after the effective date of this Judgment shall be submitted within 60 days following the effective date of this Judgment.

7. (a) Whenever the terms and conditions of this Judgment require Hooker to submit plans, specifications or protocols to EPA/State, such submissions shall include, without limitation, engineering designs, field and laboratory sampling and analytical protocols, quality control and assurance procedures (including providing to EPA/State an adequate number of split samples), construction schedules, monitoring protocols, and health and safety plans, as applicable. Such plans, specifications and protocols shall conform with industrial practices and techniques necessary to implement the purposes and goals of this Judgment. Notwithstanding any other provision of this Judgment, no activity hereunder requiring the submission of plans, specifications and protocols shall be initiated until such plans, specifications and protocols are deemed consistent with all appropriate terms and conditions of this Judgment pursuant to subparagraph (c).

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(b) EPA/State shall review Hooker's submissions made pursuant to subparagraph (a) and shall advise Hooker in writing, within 60 days after receipt, if EPA/State considers any such submission to be inconsistent with any appropriate term or condition of this Judgment. If EPA/State so advises Hooker, any such party may petition the Court, within 30 4 days following such advice, for a determination as to whether such submission is consistent with all appropriate terms and conditions of this Judgment.

(c) Plans, specifications and protocols shall be deemed consistent with all appropriate terms and conditions of this Judgment, when:

(i) Hooker has made a submission pursuant to subparagraph (a) and EPA/State has not notified Hooker on a timely basis pursuant to subparagraph (b);

(ii) Hooker, EPA, and the State file with this Court a stipulation to such effect; or

(iii) the Court makes a final determination that plans, specifications and protocols are consistent with all appropriate terms and conditions of this Judgment.

(d) As soon as practicable, but in no event later than 60 days after plans, specifications and protocols are deemed consistent with all appropriate terms and conditions

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of this Judgment pursuant to subparagraph (c), Hooker shall solicit bids, award contracts and authorize the activity consistent with such plans, specifications and protocols.

DELAY OR PREVENTION OF PERFORMANCE

8. (a) Hooker shall use its best efforts to minimize or avoid any delay or prevention of the performance of its obligations pursuant to this Judgment. If any event occurs which delays or prevents, or leads Hooker to anticipate delays or prevention of, Hooker's compliance with any appropriate term or condition of this Judgment, Hooker shall promptly so notify all parties to the Judgment. As soon thereafter as possible, but in no event later than 20 days after becoming aware of such delay or prevention or anticipated delay or prevention, Hooker shall submit a written statement to EPA/State which shall fully describe the anticipated length and cause of such delay or prevention, the actions Hooker has taken, and proposes to take, if any, to avoid the delay and to mitigate the impact of such event, and the schedules of such actions.

(b) To the extent that events which delay or prevent Hooker's compliance with any appropriate term or condition of this Judgment have been or will be caused by "force majeure," i.e., circumstances beyond Hooker's control, and Hooker has complied with the notification provision provided in subparagraph (a), the time for such performance hereunder

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shall be extended for the time period of such delay and if such circumstances prevent such performance, such performance shall be excused unless and until circumstances so change that the performance is no longer prevented; provided, however, that any excused delay or prevention of any intermediate requirement shall not result in the excused delay or prevention of any subsequent requirement if the subsequent step can reasonably be implemented without completion of the prior step. Increased costs or expenses associated with the implementation of actions required by this Judgment shall not, in any event, be a basis for extensions of time, excuses of performance or defenses to a petition for sanctions pursuant to subparagraph (f).

(c) If EPA/State and Hooker agree that the aforementioned circumstances concerning the delay or prevention have been satisfied and agree concerning the length of such delay or prevention, Hooker and EPA/State shall file with this Court a stipulation and proposed order to such effect. If, however, within 20 days after Hooker's notification to EPA/State, EPA/State and Hooker do not so stipulate or EPA/State advises Hooker in writing that they do not consider the aforementioned circumstances to have been satisfied or do not agree with the length of the delay, Hooker shall immediately advise the Court of any delay or prevention, or anticipated delay or prevention, of its performance of its obligations

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pursuant to this Judgment. Thereafter, either EPA/State or Hooker may submit the matter to the Court for resolution.

(d) Hooker shall use its best efforts to obtain on a timely basis, such permits, easements, rights of way, rights of entry, approvals, or other authorizations from any federal, state, or local governmental entity, or any corporation, partnership, association, or private person which are necessary to carry out any of Hooker's obligations pursuant to this Judgment. All such easements or other authorizations obtained from owners of real property shall contain use restrictions to prohibit interference with activities, construction, and facilities required by the Containment, Monitoring, and Maintenance Programs and by the Safety Plan. Hooker shall promptly notify EPA/State and other governmental parties hereto in the event of Hooker's inability to obtain such authorizations on a timely basis or of Hooker's receipt of governmental authorizations containing terms or conditions not specifically required by federal or state statutes or regulations, or by this Judgment. In such event, the parties shall proceed as follows:

(1) EPA/State and the other governmental parties hereto shall use their best efforts, consistent with their legal authority (recognizing that as a matter of law some of the governmental parties have the power of eminent domain), to assist in obtaining, as appropriate, all such

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authorizations which Hooker was unable to obtain and all such authorizations without terms and conditions which effectively prevent implementation of this Judgment. Nothing herein shall waive EPA/State's or Hooker's right to petition the Court to join additional parties for the purpose of effectuating complete relief in this action. If, despite Hooker's best efforts described in this subparagraph, Hooker does not obtain the aforementioned authorizations on a timely basis or if Hooker obtains authorizations containing terms and conditions which effectively prevent compliance with the terms and conditions of this Judgment, the time for performance of its obligations pursuant to this Judgment shall be extended as appropriate. If EPA/State and Hooker agree that, despite Hooker's best efforts, such authorizations or access cannot be obtained, Hooker and EPA/State shall file with this Court a stipulation and proposed order to such effect enlarging times for or excusing performance, as appropriate. If, however, EPA/State and Hooker do not so stipulate or EPA/State advises Hooker in writing that they do not consider the aforementioned circumstances to have been satisfied, any such party may petition the Court for such extension or excuse, or for other appropriate relief.

(2) In addition, if, despite Hooker's best efforts, the aforementioned authorizations contain terms and conditions not required by federal and state statutes

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and regulations, and those terms and conditions are inconsistent with, or materially different from, the terms and conditions of the Judgment, any party hereto may petition the Court seeking appropriate relief. In resolving the issues raised by such petition, the Court shall determine whether such terms and conditions are inconsistent with, or materially different from, the terms and conditions of this Judgment and, if so, the Court may require modification of the terms and conditions contained in such authorizations which were obtained, require modification of the Judgment to take account of such terms and conditions, or provide such other relief, if any, which the Court deems appropriate to resolve the issues raised by the petition.

(e) Pending final determination of the issues raised by a petition described in subparagraph (d), Hooker may seek an order to stay performance of any obligation pursuant to this Judgment whose implementation requires authorizations which are the subject of the aforementioned petition.

(f) Upon order of the Court following a petition seeking such relief by EPA/State, Hooker shall pay into the dedicated account described in subparagraph 11(a), amounts up to \$5,000.00 per day for each day it unjustifiably fails to comply with the provisions of this Judgment. In determining the amount to be paid, account shall be taken of the economic savings, if any, to Hooker of delaying or failing to comply

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with the provisions of this Judgment, the degree or seriousness of the non-compliance, the duration of the non-compliance, the degree of endangerment to human health or the environment, if any, resulting from the lack of compliance, and other relevant factors, if any; provided, however, that no payment shall be assessed for each day that compliance is (i) delayed or excused pursuant to this paragraph, or by order of the Court, or (ii) caused solely by the failure of EPA/State or any other governmental party hereto to use its best efforts pursuant to subparagraph (d). The foregoing petition by EPA/State shall propose amounts to be paid and the basis for such proposed amounts, taking account of the considerations set out above. The Court shall order such amounts to be paid unless, in response to such petition, Hooker demonstrates that no payment is justified or that the amounts proposed are unjustified, taking account of the aforementioned considerations. Any payment made or collected pursuant to this paragraph shall be deemed in full satisfaction of all civil claims for fines, penalties, reimbursements or other monetary assessments by EPA/State or any other governmental party hereto arising out of Hooker's failure to comply with this Judgment within the first eight years after the effective date of Judgment. The terms of this subparagraph shall terminate eight years after the effective date of Judgment.

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ENTRY AND INSPECTION

9. During the implementation of the Containment, Monitoring, and Maintenance Programs, EPA/State shall have authority to enter all property owned or controlled (by easement or otherwise) by Hooker in the Hyde Park - Bloody Run Area during regular business hours for the purposes of inspecting and copying (at the requesting party's expense) records, operating logs, contracts, or other documents or property required to assess Hooker's compliance with this Judgment. Hooker shall also allow EPA/State to inspect all other property and to inspect and copy (at the requesting party's expense) all other records, operating logs, contracts, or other documents (other than property and documents not subject to inspection and discovery pursuant to Rule 34 of the Federal Rules of Civil Procedure; provided, however, no party shall have been deemed to waive any privilege available under New York State law) which EPA/State requires to assess Hooker's compliance with this Judgment. Hooker shall honor all reasonable and timely requests for such entry or inspection by EPA/State conditioned only upon presentation of proper credentials and concurrent written notification to Hooker's Program Coordinator (as designated pursuant to Paragraph 13) of the purpose for said request. Nothing herein shall constitute a waiver of the rights of Hooker, EPA or the State to assert in any action or proceeding claims or defenses

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arising out of any liabilities or damages which may be incurred by any person as a result of EPA/State's presence at the Hyde Park - Bloody Run Area pursuant to this paragraph; provided, however, that persons entering such area pursuant to this paragraph or Paragraph 13 shall not be deemed Hooker's business invitees. Nothing herein shall constitute a waiver of EPA's or the State's right to secure a warrant for entry to the Hyde Park - Bloody Run Area nor a waiver of Hooker's rights to oppose the procurement and use of such a warrant.

10. Hooker shall identify to EPA/State all laboratories, whether or not owned by Hooker, participating in the performance of the requirements of this Judgment. To the extent provided in, and in accordance with, Paragraph 9, EPA/State may enter and inspect any such laboratory owned or operated by Occidental, Hooker or any subsidiary of Occidental and inspect and copy (at the requesting party's expense) all records located therein required to assess Hooker's compliance with this Judgment; in addition, Hooker shall not object to EPA/State obtaining such access to laboratories owned by third parties.

FUND, DISCHARGE AND RELEASE

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11. (a) Within 60 days after the effective date of Judgment, Hooker shall transmit to the United States of America and the State of New York, by delivery to the Assistant Attorney

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General, Land and Natural Resources Division, United States Department of Justice, a check for One Million Five Hundred Thousand Dollars (\$1,500,000) made payable to the State of New York. Thereafter, the Assistant Attorney General shall deliver such check to the Attorney General of the State of New York. The sums thus delivered shall be made available through a dedicated account in the New York State Department of Audit and Control for the cost of (i) supervision by the New York State Department of Environmental Conservation of the implementation of this Judgment, including, among other things, review of the proposed plans, specifications and protocols and inspection of construction, monitoring and maintenance activities associated therewith; (ii) development and implementation by the New York State Department of Environmental Conservation of technology, protocols and remediation programs to address environmental problems associated with the generation, transportation, storage, handling, disposal and migration of chemical wastes; (iii) studies by the New York State Department of Health concerning the development of technology, procedures and protocols for defining, eliminating and controlling problems associated with the disposal of chemical wastes; and (iv) legal activities, as necessary, relating to this Judgment, by the New York State Department of Law. No disbursements shall be made from the aforementioned dedicated account until one day after the date on which an appeal from

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the entry of this Judgment or from a denial of a petition for intervention must be filed by any person or entity alleging that this Judgment inadequately protects health or the environment or one day after such appeal has been finally determined, whichever is later.

(b) This Judgment shall constitute full discharge and release of Occidental, Hooker and any other Occidental subsidiary by all governmental parties hereto for the following:

(i) All claims for civil penalties which were raised or could have been raised in this action, including, without limitation, claims for civil penalties based on alleged violations of the Clean Water Act;

(ii) All other claims resulting from or relating to any migration or discharge of chemicals or other substances from the Landfill Site and all other claims which were raised or could have been raised in this action, except claims resulting from, or relating to, any migration or discharge from the Landfill Site of chemicals or other substances which did not occur prior to the effective date of this Judgment;

(iii) All claims which may arise after the effective date of this Judgment, pursuant

to statutes or regulations whose provisions have as their purpose, in whole or in part, the protection of human health or the environment, out of activities Hooker is required to undertake in compliance with the Judgment; provided, that such claims do not arise as a result of Hooker's failure to exercise reasonable care with regard to such activities.

(c) Compliance with the provisions of this Judgment shall be considered a complete defense to any action any governmental party hereto may hereinafter bring against Occidental, Hooker or any Occidental subsidiary which arises out of or relates to the migration or discharge of chemicals or other substances from the Landfill Site occurring subsequent to the effective date of this Judgment, except for the following actions:

(i) Actions before this Court for injunctive relief, either pursuant to the terms of this Judgment or in a separate action, relating to such migration or discharge, except for such migration or discharge whose occurrence was known by any governmental party hereto as of the effective date of this Judgment, or whose occurrence reasonably could have been anticipated by any governmental party hereto as of the effective date of this Judgment;

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(ii) Actions before the Court for injunctive relief grounded upon statutes, or regulations promulgated thereunder, which become effective subsequent to the effective date of this Judgment; and

(iii) Actions before this Court for injunctive relief or civil penalties grounded upon violations of permits which Hooker is issued pursuant to subparagraph 8(d) or actions before this Court for civil penalties grounded upon violations of any injunctive order compelling compliance with statutes, or regulations promulgated thereunder, which become effective subsequent to the effective date of this Judgment.

(d) Nothing in this paragraph shall be deemed to waive or release any claims by EPA/State which arise out of claims subrogated to EPA/State by a non-party to this action where EPA/State has been required by applicable federal or state statute to compensate such non-party for injury caused by the discharge or migration of chemicals from the Landfill Site prior to the effective date of this Judgment.

(e) Within 15 days after the effective date of this Judgment, the Town of Niagara shall deliver to Hooker a stipulation dismissing its action, Town of Niagara v. Hooker

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Chemicals & Plastics Corp. (New York State Supreme Court, commenced January 29, 1979), with prejudice, but without costs.

(f) Nothing in this paragraph shall be deemed to waive or release any cross-claims for contribution and/or apportionment by the Town of Niagara or the Town of Lewiston asserted against Occidental, Hooker, or any Occidental subsidiary in any pending or future legal action brought by a non-party to this action for damages for injury allegedly caused by the discharge or migration of chemicals from the Landfill Site.

GUARANTEE

12. Within 90 days after the effective date of this Judgment, Hooker shall obtain from Occidental the guarantee contained in Addendum IV (hereinafter "Guarantee"). EPA and the State entered into this Judgment on the condition that Hooker obtain this Guarantee from Occidental. Upon filing the Guarantee with the Court, Occidental, Occidental Petroleum Investment Co., Hooker Chemical Corporation, and Oxy Chemical Corporation shall be, and the same hereby are, dismissed with prejudice as defendants in this proceeding; provided, however, that the duration and maximum amount of the Guarantee may be modified upon satisfactory showing to the Court by EPA or the State that such modification is necessary in order to secure Hooker's obligations pursuant to this Judgment.

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PROGRAM COORDINATORS

13. Hooker, EPA, and the State shall each designate a Hyde Park - Bloody Run Area Program Coordinator (hereinafter "Coordinator") and an alternate. Within 15 days following the effective date of this Judgment, each such party shall advise the others of the names and titles of the persons so designated. At any time Hooker, EPA, or the State appoints a new Coordinator, alternate, or both, the other such parties shall be so advised in writing. To the maximum extent possible, communications between EPA, State, and Hooker concerning the terms and conditions of this Judgment shall be made between said Coordinators. The Coordinator designated by Hooker shall receive all monitoring reports and all other relevant information concerning Hooker's performance of the terms and conditions of this Judgment, and shall be the designated agent for service for the purposes of subparagraph J(5) of Addendum V, and each Coordinator shall be responsible for assuring that all communications from the others are appropriately disseminated and processed. Hooker shall provide EPA/State Coordinators with suitable office space at the Landfill Site. The Coordinators shall have no personal civil liability with respect to any action taken pursuant to this Judgment.

MISCELLANEOUS PROVISIONS

14. The effective date of this Judgment shall be

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one day after the date on which any appeal from the entry of this Judgment must be filed. Nothing in this Judgment shall constitute a waiver of Hooker's right to move for a stay in the enforcement of this Judgment, or any portion thereof, during the pendency of any appeal from this Judgment or from any order in this action.

15. The terms and conditions of this Judgment shall not be deemed applicable to any other property or landfill site, and any agreement or consent judgment between two or more parties hereto which relates to other landfill sites shall be wholly separate and independent from the terms and conditions of this Judgment.

16. If EPA/State or Hooker considers that any party has failed to comply with any term or condition of this Judgment, either EPA/State or Hooker may seek appropriate relief from the Court.

17. Because the language of this Judgment represents the consensus of the parties, any modifications proposed prior to entry of this Judgment by the Court to such language as filed shall require the written consent of each party to the Judgment. If all parties do not so consent to all such modifications within ten days after the Court submits the modifications to them, all previously-filed stipulations in this action, including any enlargements of time and discovery moratoria, shall be vacated and this action shall proceed in

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accordance with the Federal Rules of Civil Procedure. In addition, in such event, this Judgment shall be void and of no force and effect and shall be inadmissible in this action for any purpose.

18. (a) Within 15 days after the effective date of this Judgment, Hooker shall file a certified copy of this Judgment with the Niagara County Clerk, to be recorded against any parcel of land which includes, in whole or in part, the Landfill Site. A-2

(b) Within 15 days after the date of obtaining any easement pursuant to subparagraph 8(d) of this Judgment, Hooker shall file a copy of such easement with the Niagara County Clerk, to be recorded against any parcel of land to which such easement is applicable.

(c) All property, including real property structures, constructions, and fixtures, owned by Hooker in the Hyde Park - Bloody Run Area may be freely alienated; provided that 45 days prior to the date of such alienation Hooker gives EPA/State written notice of such alienation and a description of which of Hooker's obligations, if any, pursuant to the Judgment shall be performed by the person or entity to whom the property is alienated. Hooker may proceed with such alienation unless, within 30 days following such notification (i) EPA/State files a petition with the Court objecting to such alienation on grounds that it would interfere with the

performance of Hooker's obligations pursuant to this Judgment and (ii) in response to such petition, the Court orders such alienation not to proceed pending final determination of the issues raised by such petition or the Court determines that such alienation would interfere with Hooker's obligations pursuant to this Judgment. In the event of such alienation, all of Hooker's obligations pursuant to this Judgment shall continue to be met either by, at Hooker's option, Hooker or the person or entity to whom the property is alienated. Any deed, title or other instrument of conveyance of Hooker's property in the Hyde Park - Bloody Run Area shall contain notice of such provisions for continuing performance as hereinabove described and, additionally, shall clearly describe the use for which the property has been employed by Hooker. Notwithstanding any statement in any such deed, title or instrument which purports to transfer responsibility for continued containment, monitoring and maintenance obligations to any transferee of Hooker's interest in said property, Occidental's obligations under the Guarantee described in Paragraph 12 shall remain in full force and effect.

19. The Court shall retain jurisdiction to modify and enforce the terms and conditions of this Judgment and to resolve all disputes arising hereunder as may be necessary or appropriate for the construction or execution of this Judgment. In order to assist the Court in resolving technically complicated and complex issues which may hereafter be

presented to it in this action, any party hereto may petition the Court, pursuant to Rule 53 of the Federal Rules of Civil Procedure, to refer such issues as appropriate to a master.

20. All information and documents submitted by Hooker to EPA/State pursuant to this Judgment shall be subject to public inspection unless identified and deemed as confidential by Hooker in conformance with 40 C.F.R. Part 2 or applicable New York State law. The information and documents so identified as confidential will be disclosed only in accordance with EPA regulations or applicable New York State law.

21. The terms and conditions of this Judgment shall include the terms and conditions contained in the Addenda attached hereto, which are incorporated herein by reference.

22. This Judgment shall bind and inure to the benefit of all the parties hereto and their respective successors and assigns.

23. This Judgment may be executed in counterpart. Each counterpart may serve as a duplicate original.

24. Each party shall bear its own costs and disbursements of this action.

25. The parties represent to the Court that counsel of record have authority to signify the parties' approval by signing below.

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UNITED STATES OF AMERICA

By: James W. Moorman
James W. Moorman
Assistant Attorney General
Land and Natural Resources
Division
U.S. DEPARTMENT OF JUSTICE

By: Richard J. Arcara
Richard J. Arcara
United States Attorney
Western District of New York

By: Jack Penca
Jack Penca
Assistant United States Attorney
Western District of New York

By: Harry J. Trilling
Harry J. Trilling
Attorney, Hazardous Waste Section
U.S. DEPARTMENT OF JUSTICE

Dated: January 19, 1981

By: Jeffrey G. Miller
Jeffrey G. Miller
Acting Assistant Administrator
for Enforcement
UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY

By: James D. Bunting
James D. Bunting
Legal Advisor for Nationally
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By: Charles Warren
Charles Warren
Regional Administrator, Region II
UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY

By: George Shanahan
George Shanahan
Attorney, Region II
Water Enforcement Branch
UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY

Dated: January 19, 1981

STATE OF NEW YORK
By: Robert Abrams
Robert Abrams
Attorney General of the
State of New York

By: Robert Hermann
Robert Hermann
Attorney-in-Chief
Public Advocacy Division

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By: Marcia J. Cleveland
Marcia J. Cleveland
Assistant Attorney-in-Charge
Environmental Protection Bureau

By: Lorelei Joy Borland
Lorelei Joy Borland
Assistant Attorney General of the
State of New York

By: Mary Ellen Burns
Mary Ellen Burns
Assistant Attorney General of the
State of New York

By: Robert Flacke
New York State Department of
Environmental Conservation,
Robert Flacke, Commissioner

By: David Axelrod
New York State Department of
Health,
Dr. David Axelrod, Commissioner

Dated: April 15, 1981

TOWN OF NIAGARA, NEW YORK

By: Robert Merino
Robert Merino
Attorney for the Town of
Niagara, New York

Dated: Jan 19, 1981

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TOWN OF LEWISTON

By: 

Edward P. Jesella, Jr.
Attorney for the Town of
Lewiston, New York

Dated: January 19, 1981

HOOKEr CHEMICALS & PLASTICS CORP.

By: 

Phillips, Wizer, Benjamin,
Krim & Ballon

By: 

Wald, Harkrader & Ross

By: 

Phillips, Lytle, Hitchcock,
Elaine & Huber

Dated: January 19, 1981

ENTER:

Judgment is hereby entered in
accordance with the foregoing.

UNITED STATES DISTRICT JUDGE

ADDENDUM I: CONTAINMENT PROGRAM

INTRODUCTION

A. The Containment Program shall consist of the obligations set forth in Paragraphs B through M, subject to all terms and conditions of the Judgment; nothing in this paragraph shall modify or alter those obligations. The purpose of the Containment Program is to identify, and where required, contain and clean up chemicals, using Requisite Remedial Technology, which have migrated in soils, bedrock, sediment, surface run-off waters, groundwater, and air from the Landfill Site at or above specific plume definition levels.

PERIMETER CAPPING

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B.(1) Without altering existing structures, areas to the north, south, east, and west of the boundary of the Landfill Site shall be surveyed and capped as described below.

(a) The boundary of the area to be capped shall be determined by taking a single sample or composite of two soil samples at each sampling point as follows:

(i) a soil sample consisting of a core 18 inches in length taken from ground level to 18 inches below ground level; and

(ii) if such ground surface consists of more than 18 inches of fill material, a second soil sample consisting of a core 12 inches in length

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encompassing the interface of such fill and the soil beneath it; provided, however, that in no event shall a soil sample under this subparagraph be collected more than five feet below ground level.

Such soil samples shall first be taken at 200-foot intervals along the perimeter shown by the dotted line on Figure 2. These samples shall be analyzed for monochlorobenzene (MCB) and monochlorotoluenes (MCT) at a soil survey level of 10 parts per billion and for 2,4,5-trichlorophenol (TCP) and hexachlorobenzene (HCB) at a soil survey level of 100 parts per billion. (For the purposes of this Judgment, TCP and HCB shall serve as surrogates for tetrachlorodibenzo-p-dioxins [TCDD]; provided, however, that Hooker may demonstrate through TCDD analysis as described in subparagraph (B)(1)(c)(i) that the presence of TCDD is not detected in any such sample.) Sampling shall continue along lines parallel to the perimeter shown by such dotted line, on one or both sides of such perimeter, until samples are obtained at 200-foot intervals which do not exceed the soil survey levels at either of the aforementioned depths. The locations of those samples not exceeding the soil survey levels which are closest to the boundary of the Landfill Site shall initially define the outer boundary of the area to be capped pursuant to this paragraph.

(b) To further confirm the boundary, a composite sample from three points approximately equi-distant between

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each two adjacent locations shall be collected and analyzed as described above. If any such composite sample exceeds the soil survey levels, individual samples shall be taken and analyzed at the locations from which the composite sample was taken. Such boundary confirmation sampling shall proceed outward from the Landfill Site perpendicular to the initially defined outer boundary line until samples are obtained which do not exceed the soil survey levels. The locations of those samples not exceeding the soil survey levels which are closest to the Landfill Site shall confirm the outer boundary of the area to be capped pursuant to this paragraph.

(c)(i) To establish the final boundary, five soil samples composited from samples taken at approximately 100-foot intervals encompassing the entire confirmed boundary described above, shall be collected and analyzed for total tetrachlorodibenzo-p-dioxins (TCDD) at a detection level achieved using generally accepted high resolution mass spectrometry TCDD analytical techniques. Protocols for such techniques shall be submitted to EPA/State pursuant to the provisions of Paragraph 7 of the Judgment. If analysis of a composite soil sample does not indicate the presence of TCDD, the boundary confirmed pursuant to subparagraph (b) shall be the final boundary;

(ii) If analysis of a composite soil sample

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indicates the presence of TCDD, Hooker shall, at its option, proceed as described in subparagraph (d)(i) or as hereinafter described. Along a line 25 feet outside of that portion of the confirmed boundary where TCDD was detected, Hooker shall proceed as follows: at each 200-foot interval along such line, soil samples shall be collected and analyzed for MCB, MCT, TCP, and HCB; and at approximately 100-foot intervals along such line, one composite soil sample for such portion shall be collected and analyzed for TCDD;

(iii) If analyses of such additional soil samples do not indicate the presence of either TCDD or the presence of MCB, MCT, TCP, or HCB in excess of their soil survey levels, a line midway between the confirmed boundary described in subparagraph (b) and the line described in subparagraph (c)(ii) shall define the final boundary of the area to be capped pursuant to this paragraph;

(iv) In the event analyses of such additional soil samples indicate the presence of TCDD, but the absence of MCB, MCT, TCP, and HCB in excess of their soil survey levels, Hooker shall make a written submission to EPA/State, along with all underlying data, explaining the presence of TCDD and the absence of MCB, MCT, TCP, and HCB. If EPA/State there-

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after does not proceed as described in subparagraph (d)(ii), the final boundary shall be a line midway between the confirmed boundary described in subparagraph (b) and the line described in subparagraph (c)(ii);

(v) If analyses of such additional soil samples indicate the presence of MCB, MCT, TCP, or HCB in excess of their soil survey levels, Hooker shall resume the survey procedures described in subparagraph (a) along a parallel line 25 feet outside the line described in subparagraph (c)(ii).

(d)(i) In lieu of collecting additional soil samples pursuant to subparagraph (c)(ii), Hooker shall make a written submission to EPA/State, along with all underlying data, showing that the TCDD detected in the composite soil sample described in subparagraph (c)(i) did not migrate from the Land-fill Site. If EPA/State thereafter does not proceed as described in subparagraph (d)(ii), the final boundary shall be the boundary confirmed pursuant to subparagraph (b);

(ii) Following Hooker's submission described in subparagraphs (c)(iv) or (d)(i), EPA/State may petition the Court within 60 days of such submission to require Hooker to proceed as described in subparagraphs C(8) and C(9); provided, how-

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ever, that in no event shall Hooker be required to so proceed unless it is determined that TCDD has migrated from the Landfill Site beyond the boundary of the area to be capped pursuant to this paragraph.

(2) (a) The historic drainage ditches or swales shown on Figure 3 (hereinafter "Swales") shall be identified E-5 at the point of their intersection with the outer boundary defined pursuant to subparagraph (1). Identification of Swales Alpha and Beta, as shown on Figure 3, shall not require the excavation or sampling of soil more than five feet below ground level; identification of Swales Gamma and Delta, as shown on Figure 3, shall not require excavation or sampling of soil deeper than one foot below the interface of fill material and the soil beneath it. If a Swale is so identified, its width and minimum depth below ground surface at the boundary shall be determined and a composite soil sample, consisting of two cores 12 inches in length from representative locations, at the depths described above, shall be collected and analyzed for those compounds at the soil survey levels described in subparagraph (1)(a)(ii).

(b) If the samples do not exceed the aforementioned soil survey levels, no further action concerning that E-6 Swale shall be required. If, however, the sample exceeds the soil survey levels, a second composite soil sample, consisting

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of two cores 12 inches in length from representative locations, at the depths described above, within the path of the Swale shall be collected 50 feet outside of such outer boundary along the path of such Swale.

(c) If such sample at 50 feet does not exceed the soil survey levels, Hooker shall cap the Swale either to such 50-foot survey location or to such location along its path closer to the Landfill Site as Hooker determines by the soil survey sampling described above. If, however, such sample at 50 feet exceeds the soil survey levels, a third composite soil sample, consisting of two cores 12 inches in length from representative locations, at the depths described above, within the path of the Swale shall be collected 100 feet outside of such outer boundary along the path of such Swale.

(d) If such sample at 100 feet does not exceed the soil survey levels, Hooker shall cap the Swale either to such 100-foot survey location or to a location along its path closer to the Landfill Site as Hooker determines by soil survey sampling as described above. If, however, such sample at 100 feet exceeds the soil survey levels, Hooker shall within seven working days following such analysis so notify EPA/State and initiate a study as described in subparagraph C(8) to determine what Requisite Remedial Technology, if any, is required; provided, however, that if the aforesaid sample at 100 feet exceeding the soil survey levels is taken from the Gamma or Delta Swale, a composite soil sample, consisting of two cores 12

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inches in length from representative locations, at the depths described above, within the path of the Swale shall also be collected approximately 50 feet east of Hyde Park Boulevard and analyzed prior to the aforesaid submission. Thereafter, the parties shall proceed as described in subparagraph C(9).

(3) If any composite sample collected pursuant to subparagraphs (1) or (2) indicates the presence of chemicals through both visual and olfactory evidence, the individual samples comprising such composite sample shall be separately analyzed. C-5 E-5

(4) Soils in the utility trench ^{or} ~~for~~ the sanitary sewer line under Sherman Avenue, as shown on Figure 4, and soils in any other utility trench that is located beneath Bloody Run, will be sampled at the bottom of such trench at a location 25 feet west and a location 25 feet east of the center line of Bloody Run. In addition, bedding soils of the utility trench of the sewer line south of the Landfill Site on the property of TAM Ceramics, Inc. will be sampled at locations near the western and eastern sides, respectively, of the TAM Ceramics, Inc. buildings, as shown on Figure 5. Each soil sample shall consist of a core 12 inches in length collected and analyzed for those compounds at the soil survey levels described in subparagraph (1)(a)(ii). In addition, samples shall be taken and analyses performed on deposits at the No. 1 Sanitary Sewer Lift Station shown on Figure 4 and in the sewer line at the manhole south of the Landfill Site shown D-5

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on Figure 5. If any such sample exceeds the aforementioned soil survey levels, Hooker shall within seven working days following such analyses so notify EPA/State and initiate a study as described in subparagraph C(8) to determine what Requisite Remedial Technology, if any, is required. Thereafter, the parties shall proceed as described in subparagraph C(9).

(5) Any cap installed in accordance with this paragraph shall either consist of a cap as described in subparagraph L(1) or consist of a minimum of three inches of asphalt or six inches of reinforced concrete, as appropriate for the use of such area. Such asphalt or concrete cap shall have a maximum permeability of 1×10^{-7} cm/sec and be appropriately under-drained. The surface of the cap shall be graded to retain the natural drainage flow towards the Niagara River. Soil and debris excavated to implement the foregoing shall be disposed of pursuant to Paragraph K. Hooker shall not be required to install a cap pursuant to this paragraph until a final determination has been made of all issues raised pursuant to subparagraphs C(8) and C(9) which may require disturbance of a cap.

SURVEYS, TESTS AND STUDIES

C.(1) The areal and vertical extent of the aqueous and non-aqueous phase plumes delineating chemical migration, if any, from the Landfill Site in the Overburden and the Lock-

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port Bedrock Zone shall be defined as hereinafter described. Soil samples and core borings shall be taken and off-site survey wells shall be drilled and sampled for both aqueous and non-aqueous phase liquids as described in subparagraphs (2), (3), (4), and (5). No water sample shall be taken pursuant to this paragraph at any point where a water bearing zone as defined in subparagraph (6) is not found.

(a) To identify the aqueous phase plume, each water sample collected pursuant to this paragraph shall be analyzed for the following parameters at the plume definition levels listed below:

<u>Indicator Parameters</u>	<u>Plume Definition Level</u>
pH	Less than 4.5 or greater than 9.5 units
Conductivity	10 times background level (umhos/cm)
Total Organic Carbon (TOC)*	200 mg/L
Total Organic Halogen (TOH)*	0.5 mg/L
Phenol	0.25 mg/L
Monochlorobenzene	10 ug/L
Monochlorotoluenes	10 ug/L
Trichlorobenzenes	10 ug/L
Tetrachlorobenzenes	10 ug/L
Hexachlorocyclopentadiene	10 ug/L
Monochlorobenzotrifluorides	10 ug/L
2,4,5-Trichlorophenol	10 ug/L
Hexachlorocyclohexanes	10 ug/L

(b) Detection of any such parameter at or above its plume definition level shall establish a rebuttable presumption for the purposes of this Judgment that chemicals disposed of at the Landfill Site are present in the plume. However, when

* Hooker shall not be required under this paragraph to submit to EPA any TOC and TOH data.

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a plume is defined by pH, conductivity, TOC, TOH or phenol, no such presumption shall exist; provided, however, in such event, Hooker shall submit to EPA/State, along with its plume definition data required to be submitted pursuant to subparagraphs (2)-(6), the basis for Hooker's conclusion, with all underlying data, that a plume defined by pH, conductivity, TOC, TOH or phenol is not attributable to migration from the Landfill Site.

(c) Non-aqueous phase liquids shall be identified in the field by visual and ^{reasonable} olfactory evidence. If evidence of such non-aqueous phase liquids is found in a rock core or in the recirculation water used in well drilling under this paragraph, Hooker shall cease drilling such well and, for the purposes of this paragraph, shall presume, in lieu of further drilling and sample analysis:

(i) the presence of non-aqueous phase liquids at and below the detected depth to the top of the Rochester Shale Zone; and

(ii) the presence of the chemical parameters listed above at and below the detected depth to the top of the Rochester Shale Zone.

(2) At each location selected for the drilling of survey wells described in subparagraph (3), continuous soil and rock cores shall be taken from the top of the Overburden through the Lockport Bedrock Zone down to the top of the Rochester Shale Zone; provided, however, no rock cores need be taken below the depth where non-aqueous phase liquids are first

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detected. In the Overburden, sampling shall be by split spoon sampling and in the Lockport Bedrock Zone sampling shall be by diamond bit drilling. Any visual and olfactory evidence indicating the presence of chemicals in such soil samples, rock cores, or recirculation water shall be recorded in the field. Rock cores shall also be examined for geologic, structural, and stratigraphic characteristics and for the identification of water bearing zones. All cores collected pursuant to this paragraph shall be stored for a period of five years in standard core boxes. Thereafter, unless EPA/State takes custody of such cores within 60 days following notification by Hooker of its intent to discard such cores, Hooker may at its option so proceed.

(3) The areal extent of the aqueous phase plume shall be defined in the following manner: Off-site survey wells shall be drilled at each of the locations along the perimeter of the Landfill Site as shown in Figure 6. However, a survey well need not be drilled if a monitoring well, from which the data required pursuant to subparagraphs (3), (4), and (5) is available, presently exists at or near such location; provided that such existing monitoring well is capable of being monitored pursuant to the requirements of this paragraph. Each survey well shall be sampled once at approximately 15-foot intervals in the Overburden and the Lockport Bedrock Zone. Such samples shall be analyzed for those parameters listed in subparagraph (1)(a) at the plume definition levels specified

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therein. If a survey well sample reveals the presence of any parameter in excess of the plume definition levels described in subparagraph (1)(a) or the presence of non-aqueous phase liquids, Hooker shall cease drilling such well and shall commence drilling a new survey well 800 feet along the applicable vector, as shown on Figure 6, progressing away from the Landfill Site. Hooker shall continue to drill survey wells at 800-foot intervals and analyze samples taken therefrom until all samples from a survey well along each vector indicate neither a parameter in excess of the plume definition levels nor any non-aqueous phase liquids down to the Rochester Shale Zone. Hooker shall thereafter drill a survey well at the midpoint between the last two survey wells drilled along each vector. If samples taken from such well indicate the presence of any parameter in excess of the plume definition levels described in subparagraph (1)(a) or non-aqueous phase liquids, the lateral extent of the plume shall be presumed to be the midpoint along the vector between such midpoint well and the outermost well drilled along such line. If, however, samples taken from the midpoint well do not indicate the presence of any parameter in excess of the plume definition levels described in subparagraph (1)(a), the lateral extent of the plume shall be presumed to be the midpoint along the vector line between such midpoint well and the survey well furthest along the vector which indicates any parameter in excess of the plume

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definition levels specified in subparagraph (1)(a) or non-aqueous phase liquids. A line connecting the point on each vector representing the lateral extent of the aqueous phase plume shall define the areal extent of such plume.

(4) After the areal extent of the aqueous phase plume has been defined, Hooker shall determine the vertical extent of the aqueous phase plume in the following manner: Progressing toward the Landfill Site, along the vectors shown on Figure 6, each survey well previously drilled pursuant to subparagraph (3) shall be extended by further drilling, if necessary, in the Lockport Bedrock Zone. Each such well shall be sampled once at approximately 15-foot intervals extending from the top of the plume as described in subparagraph (3) through the Lockport Bedrock Zone. Each survey well shall be sampled and analyzed for the parameters at the plume definition levels described in subparagraph (1)(a). When a well along such vector indicates the presence of non-aqueous phase liquids, further drilling and sampling pursuant to this subparagraph shall cease along the applicable vector, and Hooker shall proceed with the activity described in subparagraph (5).

(5) The areal and vertical extent of the non-aqueous phase plume shall be defined in the following manner: Progressing away from the Landfill Site along the vectors shown on Figure 6, each survey well previously drilled pursuant to subparagraph (3) shall be extended by further drilling, if necessary, in the Lockport Bedrock Zone until

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such activity identifies the presence of non-aqueous phase liquids as described in subparagraph (1)(c). Hooker shall continue to drill survey wells until all samples from a survey well along each vector indicate that non-aqueous phase liquids are not present to the Rochester Shale Zone. Hooker shall thereafter drill a survey well at the midpoint between the last two survey wells drilled along each vector line pursuant to this subparagraph. If samples taken from such midpoint well indicate the presence of any non-aqueous phase liquids, the lateral extent of the non-aqueous phase plume shall be presumed to be the midpoint along the vector between such midpoint well and the outermost well drilled along such line pursuant to this subparagraph. If, however, samples taken from the midpoint do not indicate the presence of any non-aqueous phase liquids, the lateral extent of the non-aqueous phase plume shall be presumed to be the midpoint along the vector line between such midpoint well and the survey well furthest along the vector line which indicates any non-aqueous phase liquids. A line connecting the points on each vector representing the lateral extent of the non-aqueous phase plume shall define the areal extent of such plume.

(6) Following the activities described in subparagraphs (2), (3), (4), and (5), Hooker shall core and install three wells of at least five inches in diameter to the top of the Rochester Shale Zone adjacent to the western boundary of the Landfill Site. The location of such wells shall be

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determined through evaluation of the data collected by the survey wells described in subparagraphs (2)-(5), including (a) the yield of the identified water bearing zones; (b) the stratigraphy of the area; and (c) the apparent direction of migration of any aqueous phase plume. Pump tests shall be conducted on such wells to determine (a) the location and flow characteristics of water bearing zones throughout the entire depth of the Lockport Bedrock Zone in the area so tested; (b) the nature of connection between neighboring wells through individual water bearing zones; and (c) the capacity of wells to affect the flow of aqueous phase liquids found in such water bearing zones located in the Lockport Bedrock Zone. An appropriate number of observation wells shall also be installed. As used in this Judgment, "water-bearing zone" shall be deemed to consist of a single open joint or of a layer of rock, up to 15 feet thick, containing several such joints, which does yield or could yield, as determined by observed hydrogeologic characteristics, groundwater at a rate of 0.5 gallons or more per minute to a five-inch diameter well, or the equivalent thereto.

(7) (a) Using the data collected pursuant to subparagraphs (2)-(6), Hooker shall assess whether and to what extent any plumes defined thereby consist of chemicals which migrated from the Landfill Site in the Overburden and the Lockport Bedrock Zone; provided, however, that a plume defined by samples containing the parameters described in subparagraph

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(1)(a), with the exception of pH, conductivity, TOC, TOH or phenol, in excess of the plume definition levels shall be presumed to have migrated from the Landfill Site. Within seven working days following completion of such assessment, Hooker shall submit to EPA/State the basis for its assessment, with all underlying data. G-5

(b) In the event that such assessment indicates the presence of either (i) aqueous phase liquids from the Landfill Site containing chemicals in concentrations at or above the plume definition levels described in subparagraph (1)(a) in the regions of the Overburden and of the Lockport Bedrock Zone not addressed by Paragraph D or (ii) non-aqueous phase liquids from the Landfill Site anywhere in the Overburden or in the Lockport Bedrock Zone, Hooker shall initiate a study as described in subparagraph (8) to determine what Requisite Remedial Technology, if any, is required to address the plume composed of chemicals which have migrated from the Landfill Site. The technologies to be studied pursuant to this subparagraph shall include, without limitation, a tile drainage system designed to collect and contain non-aqueous phase liquids migrating from the Landfill Site up to 15 feet below the top of the Lockport Bedrock Zone; a grout curtain wall designed to prevent the migration of non-aqueous phase liquids from the Landfill Site; a system of grouting through controlled fractures, designed to prevent the migration of non-aqueous phase liquids from the Landfill Site, similar to that used in the petroleum G-6

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extraction industry; a system designed to remove non-aqueous phase liquids directly from the Landfill Site; and a purge well system designed to collect liquids migrating from the Landfill Site to the top of the Rochester Shale Zone; provided, however, that the reference herein, or in the study, to a technology shall not create any presumption that such technology exists, that its use is appropriate or required to address the situation under study, that its use is economically justified, or that it constitutes Requisite Remedial Technology. The results of such study shall be submitted to EPA/State no more than 120 days following the completion of the activities described in subparagraphs (2)-(6). G G

AK (8) Whenever the terms of this Judgment require Hooker to submit a study to determine what Requisite Remedial Technology, if any, is required, the provisions herein shall apply. Well logs, chemical analyses and all other technical data used in preparing a study shall be submitted to EPA/State on a monthly basis. Such study shall be submitted to EPA/State within 120 days of its initiation, except as otherwise provided in this Judgment, and shall include, without limitation, the following information:

(a) references to all scientific or technical literature used in preparation of the study;

(b) well logs, chemical analyses and all other technical data used in preparing the study;

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does not ask for

design specification

Are plans to be drawn up after study results

(c) names, titles and disciplines of all professionals engaged in the study;

(d) a description of all analytical techniques and protocols used in preparing the study;

(e) estimated costs and anticipated benefits to the public health and the environment of any action or in-action recommended in the study;

(f) a description of all analytical techniques and/or monitoring which is necessary (i) to assess what Requisite Remedial Technology, if any, is required and measures proposed, e.g., tests, analyses, etc., to obtain such information; (ii) to continue to define the plumes of chemical migration, if any, from the Landfill Site;

(g) a discussion of conditions which could lead to increased or decreased costs during implementation of any proposed action;

(h) a discussion of all technologies examined but rejected and the reasons therefor, including all reasons and data for concluding that each particular technology does not constitute Requisite Remedial Technology;

(i) the anticipated effectiveness of the Requisite Remedial Technology, if any, that is proposed;

(j) plans and protocols for monitoring the effectiveness of any proposed Requisite Remedial Technology; and

(k) if applicable, all reasons and the bases therefor for concluding that there is no Requisite Remedial

I-20

Technology required.

(9) (a) Within 120 days following receipt of any study required by the terms or conditions of this Judgment, except as otherwise provided in this Judgment, EPA/State shall advise Hooker in writing if EPA/State considers the study to be inconsistent with any term or condition of this Judgment. If EPA/State does not so notify Hooker in writing within such time period, the study shall be deemed to be consistent with all appropriate terms and conditions of this Judgment. Thereafter, Hooker shall, as soon as possible, but in no event later than 90 days thereafter, initiate implementation[?] of the action, if any, it has proposed.

Subm. get plan + spec ready on contract award to start work
(b) If EPA/State gives timely written notice

that it considers the submission to be inconsistent with the terms of this Judgment, such written advice shall include, as appropriate:

(i) all reasons for EPA/State's conclusion, including, without limitation, all data, analyses, reports, etc., upon which EPA/State based its conclusion;

(ii) a detailed description of what further actions, if any, it deems to be required. Such further actions may include, without limitation, verification of existing data, obtaining additional data, implementation of an action deemed by Hooker not to constitute Requisite Remedial Technology

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or implementation of an action considered by EPA/State to constitute Requisite Remedial Technology not studied by Hooker; and

(iii) the specific information requested in subparagraph (8).

(c) Any action which Hooker and EPA/State agree should be undertaken shall be incorporated into this Judgment by submission of a stipulation to such effect by the parties. Such submission shall include a schedule for initiating and completing such action.

(d) If, within 120 days, or longer if so stipulated, Hooker does not notify EPA/State in writing of its agreement to implement the further action described in EPA/State's written notice, either party may petition the Court, within 30 days after the expiration of the period for Hooker to notify EPA/State, seeking implementation of further action as contained in EPA/State's written advice.

BARRIER-COLLECTION SYSTEMS

D.(1) The tile drain system presently installed at the Landfill Site (hereinafter "Existing Barrier-Collection System") shall continue to be operated. Q 1

(2) A tile drain collection system partially circumscribing the Landfill Site on its north, west and south sides, as shown on Figures 7, 8, 9, and 10, shall be installed in the Overburden adjacent to the Landfill Site (hereinafter P-5

I-22

"Overburden Barrier-Collection System"). The Overburden Barrier-Collection System shall be installed to a minimum depth of ten feet below ground level, but in no event below the top of the Weathered Zone. Such Overburden Barrier-Collection System shall have a natural or man-made base at such depth with a maximum permeability of 1×10^{-7} cm/sec. The north and south perimeters of the Overburden Barrier-Collection System shall be graded at a minimum of 0.5% to the southwest and northwest corners of such system.

(3) Unless the testing described in subparagraph C(6) indicates the absence of water bearing zones at or above 15 feet below the top of the Lockport Bedrock Zone, Hooker shall install and operate a barrier-collection system in the Lockport Bedrock Zone (hereinafter "Bedrock Barrier-Collection System"). Except as provided in subparagraphs (4) and (5), the Bedrock Barrier-Collection System shall consist of a system of purge wells, as shown conceptually in Figures 11 and 12. The Bedrock Barrier-Collection System shall be designed to be capable of collecting aqueous phase liquids in the Overburden below the Overburden Barrier-Collection System and in the Lockport Bedrock Zone which have migrated from the Landfill Site to the same extent as a tile drain collection system installed to a depth equal to the greater of (a) seven feet below the top of the Lockport Bedrock Zone or (b) the maximum depth of the water bearing zone confirmed by the above-described testing; provided, however, that

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nothing in this paragraph shall require the installation of a Bedrock Barrier-Collection System designed to collect liquids more than 15 feet below the top of the Lockport Bedrock Zone.

(4) If, based upon the data collected pursuant to activities described in subparagraphs C(2)-(6), Hooker considers that a system of purge wells satisfies the design capability for the Bedrock Barrier-Collection System, it shall so notify EPA/State and submit to EPA/State all such data, plans, and specifications for the installation of such purge wells. If EPA/State does not so notify Hooker in writing within 120 days of its submission that it considers Hooker's submission to be inconsistent with subparagraph (3), the submission shall be deemed to be consistent with subparagraph (3). If, however, EPA/State gives timely written notice that it considers the submission to be inconsistent with subparagraph (3), either party may petition the Court, within 60 days of such notification, to determine whether Hooker's submission is consistent with subparagraph (3).

(5) If it is determined that the aforementioned purge well system will not meet the design capability described in subparagraph (3), Hooker shall submit to EPA/State, plans and specifications, ^{describing the} using Requisite Remedial Technology, if ^{if required} any, for a Bedrock Barrier-Collection System ~~which is required~~ to satisfy the aforementioned design capability. The plans and specifications for any construction required to implement the

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foregoing shall be submitted to EPA/State within 120 days following the determination that the ^{Behold} Barrier-Collection System does not meet the aforementioned design capabilities. Within 120 days following such submission, EPA/State shall review such plans and specifications and shall notify Hooker in writing if it deems them to be inconsistent with any term or condition of this Judgment. If EPA/State does not so notify Hooker in writing within such time period, such plans and specifications shall be deemed to be consistent with all appropriate terms and conditions of this Judgment. Thereafter, Hooker shall initiate action required to implement such plans and specifications no later than 120 days after the date upon which such plans and specifications are deemed consistent. If, however, EPA/State gives timely written notice that it considers the submission to be inconsistent with any term or condition of this Judgment, the parties shall proceed as described in subparagraphs C(9)(b)-(d).

(6) The Barrier-Collection Systems described herein shall include necessary facilities for pumping, storing, and loading as well as appropriate facilities for operational personnel. G-20
K-6

(7) To the extent that action taken pursuant to subparagraph C(9) renders unnecessary the installation or operation of any Barrier-Collection System described in this paragraph, or any facilities described in subparagraph (6), Hooker shall be relieved of its obligations herein relating G-20

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to such installation or operation.

(8) Notwithstanding any other provision of this paragraph, Hooker shall not install a Bedrock Barrier-Collection System until a final determination has been made concerning the action, if any, Hooker is required to take pursuant to subparagraph C(9). G-22

STORAGE, TRANSPORTATION, TREATMENT AND
DISPOSAL OF COLLECTED LIQUIDS AND SPENT MEDIA

N-7

E. Hooker shall store, transport, treat, and dispose of the aqueous phase liquids, non-aqueous phase liquids, semi-solids, and solid materials collected pursuant to Paragraphs C and D, and shall also store, transport, treat and dispose of residues, spent media and treated aqueous phase liquids from such treatment processes in the manner described below:

(1) Aqueous phase liquids collected pursuant to Paragraphs C and D and aqueous phase liquids contained in the existing lagoons at the Landfill Site shall be transported to and treated in an activated carbon waste water treatment system consisting of three units (dual-bed in series and a backup) or a performance equivalent system thereof which may include, without limitation, activated carbon treatment in combination with other appropriate technologies; provided, however, that any such system shall be subject to and constructed and operated in compliance with applicable federal and state statutes and O-3
S-1

regulations. In lieu of the foregoing, Hooker may dispose of untreated aqueous phase liquids directly to a municipal waste water treatment system if:

(a) Hooker submits to EPA/State a detailed plan designed to assure that the aqueous phase liquids discharged

(i) shall not pass through untreated by, shall not bypass, and shall not interfere with the proper operation of, the municipal waste water system, and (ii) shall not interfere with the proper disposal of sludges or spent media from such municipal treatment system; and

(b) EPA/State does not notify Hooker, within 30 days of the plan's submission to EPA/State, that EPA/State considers the plan to be inconsistent with the terms of this paragraph. In the event EPA/State so notifies Hooker within such time period, either party may petition the Court, within 30 days of such notification, to determine whether Hooker's plan is designed to assure that the aqueous phase liquids are discharged to the municipal waste water system as described in subparagraph (a).

(2) Commencing 60 days after the effective date of this Judgment, the activated carbon treatment system or its performance equivalent described in subparagraph (1) shall be sampled as described below.

(a) Effluent samples shall be analyzed for the parameters, treatment levels and at the frequency described below:

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<u>Parameter</u>	<u>Treatment Level</u>	<u>Sampling Frequency</u>
pH	between 5 and 10	Daily Composite
Phenol	10 mg/L (1 mg/L two years after effective date of Judgment)	Daily Composite
Total Organic Carbon	300 mg/L corrected for methanol or 1000 mg/L uncorrected	Daily Composite
Trichloroethylene	10 ug/L	Weekly Composite
Tetrachloroethylene	10 ug/L	Weekly Composite
Monochlorotoluenes	10 ug/L	Weekly Composite
Monochlorobenzene	10 ug/L	Weekly Composite
Trichlorobenzenes	10 ug/L	Monthly Composite
Tetrachlorobenzenes	10 ug/L	Monthly Composite
Monochlorobenzotrifluorides	10 ug/L	Monthly Composite
Hexachlorobutadiene	10 ug/L	Monthly Composite
Hexachlorocyclopentadiene	10 ug/L	Monthly Composite
Hexachlorocyclohexanes	10 ug/L	Monthly Composite
2,4,5-Trichlorophenol	10 ug/L	Monthly Composite
Tetrachlorodibenzo-p-dioxins	as described in sub-paragraph B(1)(c)(i)	Semi-Annual Composite of monthly samples

Tetrachlorodibenzo-p-dioxins analyses shall be discontinued when four consecutive samples do not reveal the presence of this parameter. The parameters, frequency of sampling and treatment levels described in this subparagraph shall be modified to reflect future changes in applicable federal and state statutes and regulations and to meet the federal and state permit requirements for discharges other than to the City of Niagara Falls Waste Water Treatment Plant.

(b) The discharge from the initial activated

carbon treatment bed will be analyzed daily for the appropriate parameter or parameters required to determine when such bed should be replaced in order to achieve the total system effluent treatment levels described in subparagraph 2(a). The results of both midpoint and effluent analyses shall be reported to EPA/State on a quarterly basis.

(c)(i) If effluent analysis reveals any parameter which is sampled for at a daily or weekly frequency, in excess of the treatment levels described in subparagraph 2(a) for two consecutive weeks, Hooker shall so notify EPA/State within seven working days; S-2

(ii) If such analysis reveals any parameter, which is sampled on a monthly frequency, in excess of the treatment levels described in subparagraph 2(a), Hooker shall so notify EPA/State within seven working days and shall commence sampling weekly. Such weekly sampling may cease, and monthly sampling shall resume, when the aforementioned treatment level is not exceeded for any parameter for four consecutive samples; and

(iii) If analysis reveals any parameter in excess of the aforementioned treatment levels, Hooker shall initiate action to correct operating deficiencies incident thereto. If the measurements for a given parameter exceed the aforementioned

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treatment levels for four consecutive sampling periods (or for four consecutive weeks in the case of any parameter sampled on a daily basis), Hooker shall submit a study to EPA/State pursuant to subparagraph C(8) describing what Requisite Remedial Technology, if any is required to address the situation. Thereafter, the parties shall proceed as described in subparagraph C(9). Until Hooker completes corrective action in accordance with this subparagraph, EPA/State may require the discontinuance of treatment in accordance with this paragraph.

(3) Spent media, any other semi-solid or solid residue from treatment processes described in this paragraph, and any semi-solids or solid materials containing chemical wastes which are collected pursuant to Paragraph C or by the Barrier-Collection Systems described in Paragraph D shall be transported to applicable treatment systems and treated, except as provided in subparagraph (4), via one of the following:

(a) incineration or its performance equivalent, pursuant to subparagraph (6);

(b) disposal in a secure landfill permitted pursuant to all applicable federal and state statutes and regulations; or

(c) disposal or treatment which is the performance equivalent, using Requisite Remedial Technology, of

S-2 D

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the systems described in (a) or (b); provided, however, prior to Hooker's use of such performance equivalent (i) Hooker submits to EPA/State plans describing the procedure, using Requisite Remedial Technology, which Hooker will employ; and (ii) EPA/State does not notify Hooker, within 60 days of such submission to EPA/State, that EPA/State does not consider the plan to be such a performance equivalent. In the event EPA/State so notifies Hooker within such time period, either party may move the Court, within 60 days of such notification, to determine whether Hooker's plan is the performance equivalent, using Requisite Remedial Technology, of the systems described in (a) or (b) above.

(4) Spent media may be regenerated; provided, however, that any wastes from such regeneration process are treated in accordance with all applicable federal and state statutes and regulations.

(5) Non-aqueous phase liquids collected pursuant to Paragraphs C and D, and non-aqueous phase liquids in the existing lagoons at the Landfill Site, shall be transported and treated by incineration, pursuant to subparagraph (6) or processed in a manner which is the performance equivalent, using Requisite Remedial Technology; provided, however, that the conditions of the proviso contained in subparagraph (3)(c) are satisfied prior to Hooker's use of such performance equivalent.

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(6) To the extent that the materials described in subparagraphs (3) or (5) are incinerated, the incinerator utilized:

(a) shall be operated at greater than 1200° C combustion temperature, greater than two seconds retention time, and greater than three percent excess oxygen. Such data shall be monitored continuously and recorded hourly;

(b) shall be operated at a combustion efficiency equal to or greater than 99.9 percent as defined in the following equation:

$$CE = \frac{\frac{C_{CO_2}}{2}}{\frac{C_{CO_2}}{2} + \frac{C_{CO}}{2}} \times 100$$

Where:

CE = combustion efficiency;

$\frac{C_{CO_2}}{2}$ = concentration of CO₂ in exhaust gas; 2

$\frac{C_{CO}}{2}$ = concentration of CO in exhaust gas; 2

such combustion efficiency shall be determined daily;

(c) shall be operated with a functioning device to automatically cut off waste feed to the incinerator when significant changes occur in flame combustion temperature, excess air, or scrubber water pressure;

(d) shall be operated to maintain a destruction efficiency of 99.99 percent as defined in the following equation:

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$$DE = \frac{W_{in} - W_{out}}{W_{in}} \times 100$$

Where:

DE = destruction efficiency;

W_{in} = mass feed rate of principal components of waste going into the incinerator;

W_{out} = mass emissions rate of the same principal components of the feed waste exiting to the atmosphere;

such destruction efficiency shall be monitored quarterly, for the first year and annually thereafter;

(e) shall be equipped with emission control equipment capable of removing 99 percent of the halogens from the exhaust gases;

(f) shall be operated in a manner to meet applicable federal and state statutes and regulations.

(7) If at any time the operating criteria described in subparagraphs 6(a) and 6(b) or the destruction efficiency criteria described in subparagraph 6(d) are not satisfied, Hooker shall immediately discontinue incineration pursuant to this paragraph, so notify EPA/State and initiate appropriate action to correct operating deficiencies. Such incineration may resume when corrective action is completed. If, however, the aforementioned criteria remain unsatisfied, Hooker shall immediately discontinue incineration pursuant to this paragraph, so notify EPA/State and submit a study to EPA/State pursuant

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to subparagraph C(8) describing what Requisite Remedial Technology, if any, is required to address the situation. Thereafter, the parties shall proceed as described in subparagraph C(9). Upon completion of any action undertaken pursuant to subparagraph C(8), incineration pursuant to this paragraph may resume.

(8) (a) The spent media, treatment residue and liquids, semi-solids, and solid material collected pursuant to Paragraphs C and D shall be stored in accordance with applicable federal and state statutes and regulations. Liquids collected pursuant to Paragraphs C and D shall, prior to treatment, be temporarily stored in facilities installed pursuant to subparagraph D(6). 0-1
N-6

(b) Until installation of such storage facilities, Hooker shall store liquids described in subparagraph (a), at Hooker's option, in the existing lagoons at the Landfill Site and/or in bulk containers installed within the perimeters of the Existing Barrier-Collection System; provided, however, 180 days following the issuance of permits and authorizations which allow Hooker to dispose of such liquids in its incinerator, all such liquids stored in the lagoons or in the bulk containers at the time of such issuance shall be incinerated. 0-1
If, within one year after the effective date of this Judgment, Hooker has not received such permits and authorizations or the Court has not issued a final determination raised by such circumstances, as described in subparagraph (9), Hooker shall:

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(i) add tracers to the non-aqueous phase liquids stored in the lagoons within 30 days thereafter;

(ii) install four Overburden monitoring wells approximately equi-distant around the lagoons within 60 days after adding such tracer; and

(iii) monitor such wells for such tracers within 30 days after their installation and quarterly thereafter until use of the lagoons is discontinued pursuant to subparagraph (d).

(c) If monitoring described in subparagraph (b) does not reveal the presence of such tracers, Hooker may continue to use the lagoons for storage of such liquids pursuant to this subparagraph. If, however, tracers are detected, Hooker shall within 90 days of such detection initiate corrective action to, at Hooker's option, either restore the integrity of the lagoons to prevent further migration of chemicals therefrom or temporarily store non-aqueous phase liquids in bulk containers within the perimeters of the Existing Barrier-Collection System.

(d) Following installation of facilities installed pursuant to subparagraph D(6) and incineration of the non-aqueous phase liquids described in subparagraph (b), Hooker's use of lagoons and bulk containers described in subparagraph (b) shall be discontinued.

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(9) (a) Upon notice to EPA/State, Hooker may temporarily suspend the operation of one or more of the Barrier-Collection Systems if such a system will collect liquids or other material whose disposal or treatment in compliance with this paragraph is effectively prevented as a result of one or more circumstances described below:

(i) a federal, state, or local government authorization or permit for which Hooker applied pursuant to Paragraph 8 of the Judgment has not been issued and Hooker has complied with the notice provisions of Paragraph 8;

(ii) an authorization or permit described in subparagraph (i) is issued which contains terms or conditions not specifically required by a federal or state statute or regulation or by this Judgment; or

(iii) Hooker ceases incineration and/or treatment pursuant to this paragraph in compliance with requirements by EPA/State pursuant to subparagraphs (2) and/or (7).

(b) If Hooker temporarily suspends operation of one or more Barrier-Collection Systems and EPA/State considers, and advises Hooker in writing, that such suspension is inconsistent with the terms and conditions of subparagraph 9(a), EPA/State may petition the Court for an order requiring Hooker to resume operations suspended hereunder.

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(c) Within 30 days following temporary suspension described in subparagraph (a), Hooker shall petition the Court notifying the Court of the temporary suspension, its reasons therefor, and the relief it seeks. In resolving the issues raised by such petition, the Court may:

(i) if the circumstances described in subparagraph (a)(i) have occurred, require issuance of the governmental permits or authorizations;

(ii) if the circumstances described in subparagraph (a)(ii) have occurred, require modification of the terms and conditions contained in the government permits or authorizations which were issued;

(iii) if any of the circumstances described in subparagraph (a) have occurred, modify this Judgment to take account of such circumstances; or

(iv) provide such other relief, if any, which the Court deems appropriate to resolve the issues raised by the circumstances described in subparagraph (a).

(d) Unless otherwise directed by the Court, Hooker shall resume operations suspended hereunder following final determination of all issues raised by its petition described in subparagraph (c).

BLOODY RUN OPTIONS EVALUATION

F.(1) Subject to review and approval by EPA/State as described below, Hooker shall undertake an evaluation which compares the public health and environmental risks of implementing the Bloody Run capping option described in Paragraph G with such risks of implementing the Bloody Run excavation option described in Paragraph H. F-5

(2) Within 30 days after the effective date of this Judgment, Hooker shall submit to EPA/State the name of the organization it proposes to perform the evaluation and the scope of services to be performed by such organization. F-1

If EPA/State approves the submission, the evaluation shall be initiated expeditiously, but in no event later than 30 days following such approval. If EPA/ State does not approve any portion of such submission, EPA, the State, and Hooker F-2
F-4

shall expeditiously resolve all issues raised by such action and shall authorize initiation of the evaluation as described above. Within 30 days after initiation of the evaluation, EPA, the State, and Hooker shall submit to such organization all relevant information, other than information which would not be discoverable pursuant to Rule 34 of the Federal Rules of Civil Procedure, which they possess; provided that nothing herein shall be construed as a waiver by any party of any privilege to which it is entitled pursuant to New York State law. The evaluation shall be based on such information F-3
F-5A

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and any other information which is publicly available. At least 30 days prior to the transmittal date described in subparagraph (3), each party shall have the opportunity to comment in writing on the draft of the evaluation.

F5B

F5C

(3) The final evaluation shall be completed and transmitted to EPA, the State, and Hooker within 180 days following its initiation. Within 60 days following such transmittal, EPA/State shall notify the Court and all parties to this Judgment in writing whether the capping option described in Paragraph G or the excavation option described in Paragraph H should be implemented. If EPA/State selects the excavation option described in Paragraph H the notification shall include the statement that the requirements of 40 C.F.R. 775 applicable to the activities described in Paragraph H have been satisfied. Unless otherwise ordered by the Court, Hooker shall implement the option selected by EPA/State.

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BLOODY RUN CAPPING OPTION

F1A

G. (1) Surveying and Capping

The area in the Bloody Run drainage basin between New Road and University Drive, comprised of approximately 1.6 acres of open stream and stream bed, as shown in the shaded portion of Figure 13, shall be surveyed, filled, and capped, as described below.

(a) The boundaries of the area to be capped

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shall be determined by taking surface soil samples at and, if necessary, beyond the boundaries of the shaded area of Figure 13. Soil samples each consisting of a core 12 inches in length from ground level to 12 inches below ground level shall be taken at 200-foot intervals along the boundaries of the shaded portion of Figure 13 and, if necessary, beyond those boundaries at intervals of 25 feet to the west of the western boundary and to the east of the eastern boundary. Such samples shall be analyzed for monochlorobenzene (MCB) and monochlorotoluenes (MCT) at a soil survey level of 10 parts per billion and for 2,4,5-trichlorophenol (TCP) and hexachlorobenzene (HCB) at a soil survey level of 100 parts per billion. The samples closest to the center of the Bloody Run basin which do not contain MCB, MCT, TCP, or HCB in excess of the aforementioned soil survey levels shall initially define the outside boundaries of the area to be capped pursuant to this paragraph.

(b) To further confirm the boundary, a composite sample from three points approximately equi-distant between each two adjacent locations sampled initially shall be collected and analyzed as described above. If any such composite sample exceeds the soil survey levels, individual samples shall be taken and analyzed at the location from which the composite was taken. Such boundary confirmation sampling shall proceed outward from the center of the Bloody Run basin perpendicular to the initially-defined outer boundary

I-40

line until samples are obtained which do not exceed the soil survey levels. The locations of those samples not exceeding the soil survey levels which are closest to the center of the Bloody Run basin shall confirm the outer boundary of the area to be capped pursuant to this paragraph.

(c) To establish the final boundary, five soil samples composited from samples taken at approximately 100-foot intervals encompassing the entire confirmed boundary described above, shall be collected and analyzed for total tetrachloro-dibenzo-p-dioxins (TCDD) at a detection level achieved using generally accepted high resolution mass spectrometry TCDD analytical techniques. Protocols for such techniques shall be submitted to EPA/State pursuant to the provisions of Paragraph 7 of the Judgment. If analysis of a composite soil sample does not indicate the presence of TCDD, the boundary confirmed pursuant to subparagraph (b) shall be the final boundary. If, however, analysis of a composite sample indicates the presence of TCDD, Hooker shall proceed in accordance with subparagraphs B(1)(c)(ii)-(v) and B(1)(d). ^{NAME C.C.} E-14

(d) The area defined by the boundary described pursuant to the preceding subparagraphs shall be filled as follows: a base layer of moisture sorbent material, where appropriate; appropriate material having a maximum permeability of 1×10^{-6} cm/sec; and a clay cap of two feet having a maximum permeability of 1×10^{-7} cm/sec. The cap shall also include the same design characteristics as the Landfill Site E-14

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cover described in subparagraphs L(1)(b)-(c). The area shall be graded to a minimum of 3% and sloped to drainage swales which allow controlled runoff.

(2) Culvert and Storm Sewer Securement

The following, as shown on Figure 14, shall be secured by plugging with appropriate grouting material for the entire length thereof and by sealing the bedding material at the ends of culverts and storm sewers and at all inlets and manholes:

(a) The culverts under New Road, Sherman Avenue, Belvedere Avenue and the culvert under University Drive connecting Bloody Run with the storm sewer described in subparagraph (c);

(b) The storm sewer from the manhole at the southern property boundary of Greif Bros., Inc. to the northern side of the Greif Bros. building, including the manholes and inlets leading thereto; and

(c) The University Drive storm sewer, including manholes and inlets leading thereto, from the University Drive culvert described in subparagraph (a) to the box culvert at the Robert Moses State Parkway.

Worry to Receiver 10
Enlist US 124

(3) Bloody Run Diversion

Prior to initiation of the activities described in subparagraphs (1)(d) and (2) herein, a diversion channel and a system of storm sewers shall be constructed, as shown on Figure 15, and the flow of Bloody Run shall be diverted thereto. That

portion of the storm sewer system installed along University Drive shall be installed on the north or south, at Hooker's option, of University Drive. If requested by Greif Bros., Inc., a sewer shall be constructed to transport the effluent discharged from the Greif Bros., Inc. property to the diversion channel; provided, however, that Hooker shall not be responsible for such effluent.

BLOODY RUN EXCAVATION OPTION

H. (1) Surveying and Excavation

The area in the Bloody Run drainage basin between New Road and University Drive, as shown on Figure 13, shall be surveyed, excavated and capped, as described below.

(a) To determine the lateral and vertical extent of soil to be excavated, soil borings originating at surface level in the center of the basin shall be made in the Overburden. Soil samples shall be taken along cross sections spaced at 200-foot intervals between New Road and University Drive at maximum distances of 25 feet along each cross section. Soil samples also shall be taken at depth intervals of two and one-half feet. Such soil samples shall be analyzed for monochlorobenzene (MCB) and monochlorotoluenes (MCT) at a soil survey level of 10 parts per billion and for 2,4,5-trichlorophenol (TCP) and hexachlorobenzene (HCB) at a soil survey level of 100 parts per billion. The samples closest to the surface and center of the Bloody Run basin which do

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not contain MCB, MCT, TCP, or HCB in excess of the aforementioned soil survey levels shall initially define the boundaries of the soil to be excavated pursuant to this paragraph.

duplicate of 2-1 (b) To further confirm the boundary, a composite sample from three points approximately equi-distant between each two adjacent locations along the initial boundary shall be collected and analyzed as described above. If any such composite sample exceeds the soil survey levels, individual samples shall be taken and analyzed at the location from which the composite sample was taken. Such boundary confirmation sampling shall proceed outward from the center of the Bloody Run basin perpendicular to the initially-defined outer boundary line until samples are obtained which do not exceed the soil survey levels. The locations of those samples not exceeding the soil survey levels which are closest to the center of the Bloody Run basin shall confirm the outer boundary of the area to be capped pursuant to this paragraph.

duplicate of 2-1 (c) To establish the final boundary, five soil samples composited from samples taken at approximately 100-foot intervals encompassing the entire confirmed boundary described above, shall be collected and analyzed for total tetrachloro-dibenzo-p-dioxins (TCDD) at a detection level achieved using generally accepted high resolution mass spectrometry TCDD analytical techniques. Protocols for such techniques shall be submitted to EPA/State pursuant to the provisions of Paragraph

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7 of the Judgment. If analysis of a composite soil sample does not indicate the presence of TCDD, the boundary confirmed pursuant to subparagraph (b) shall be the final boundary. If, however, analysis of a composite sample indicates the presence of TCDD, Hooker shall proceed in accordance with subparagraphs B(1)(c)(ii)-(v) and B(1)(d). F-14

(d) The soil excavated pursuant to this paragraph shall be disposed of in the Landfill Site in accordance with Paragraph K. Following excavation, Bloody Run shall be restored to its original contours by replacing such excavated material with soil, clay and ground cover. The soil excavated at a depth of greater than three and one-half feet below original contours shall be replaced with an appropriate soil having a maximum permeability of 1×10^{-6} cm/sec. The soil excavated at a lesser depth up to one-half foot below original contours shall be replaced with clay having a maximum permeability of 1×10^{-7} cm/sec. The soil excavated from such depth to ground level shall be replaced with appropriate topsoil and seeded or sodded to restore the natural characteristics of the area. F-14

(2) Culvert and Storm Sewer Clean-Up and Replacement

(a) The culvert and culvert bedding under New Road, Sherman Avenue, and Belvedere Avenue, as shown on Figure 16, shall be removed and replaced. The storm sewer and storm sewer bedding between the southern boundary of property F-19

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presently owned by Greif Bros., Inc. and the southern side of the building on such property shall be removed and replaced.

(b) The storm sewer under the Greif Bros., Inc. building as shown on Figure 16, shall be cleaned with water using a high pressure jetting head with alternate applications of a porcupine and sponge pig. During cleaning, a sample of the collected wash water will be analyzed for TCP and HCB. Cleaning will continue until the TCP and HCB concentrations in the wash water do not exceed 100 parts per billion. Water so collected will be stored, transported, treated, and disposed of as provided in Paragraph E.

(c) The University Drive culvert and storm sewer, including manholes and inlets leading thereto, commencing at the point where the University Drive culvert connects Bloody Run with such storm sewer to the box culvert at the Robert Moses State Parkway, as shown on Figure 16, shall be secured by plugging the entire length thereof with appropriate grouting material and by sealing the bedding material at the ends of the storm sewer, and at all inlets and manholes. Such storm sewer shall be replaced by a storm sewer installed on the north or south side of University Drive at Hooker's option, as shown on Figure 17.

(3) Temporary Bloody Run Diversion

Prior to initiation of the activities described in subparagraphs (1)(d) and (2) herein, the flow of Bloody Run

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(including effluent discharged from the Greif Bros., Inc. property) shall be temporarily diverted so as to permit such activities to proceed. Following completion of these activities, such flow and discharges shall be directed into the reconstructed Bloody Run.

GORGE AREA CLEAN-UP

I.(1) Following completion of activities described in Paragraph G or H, Hooker shall clean the existing box culvert, the area four feet on each side of the center line along the Niagara River Gorge face from the point where Bloody Run emerges to the point where Bloody Run flows into the Niagara River, and the area ten feet on each side of the center line of the shore area where Bloody Run flows into the Niagara River, as shown on Figure 18. Prior to such cleaning, loose soils and sediment in the area to be cleaned, including the area where Bloody Run flows into the Niagara River, shall be collected and removed. The Niagara Gorge face shall be cleaned with a high pressure water jet covered by a portable enclosure which is designed to minimize airborne dispersion. Plans, specifications, and protocols for cleaning and removal techniques shall be submitted to EPA/State pursuant to the provisions of Paragraph 7 of the Judgment. During all cleaning described in this paragraph, wash water will be collected and samples thereof will be analyzed for TCP and HCB. Cleaning

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will continue until the TCP and HCB concentrations in the particulate portion of the wash water do not exceed 100 parts per billion. Water so collected will be stored, transported, treated, and disposed of as provided in Paragraph E.

(2) (a) Following completion of the activities described in subparagraph (1), Hooker shall take a composite sediment sample from the areas cleaned pursuant to subparagraph (1). Such composite sediment sample shall be analyzed for TCP and HCB at a cleaning level of 100 ppb and for TCDD at a detection level achieved using generally accepted high resolution mass spectrometry TCDD analytical techniques. Protocols for such techniques shall be submitted to EPA/State pursuant to the provisions of Paragraph 7 of the Judgment;

(b) If analysis of such composite sediment sample indicates the presence of TCP or HCB in excess of their cleaning levels, Hooker shall continue to clean the areas described in subparagraph (1) until a subsequent composite sediment sample does not indicate the presence of TCP or HCB in excess of their cleaning levels;

(c) If analysis of such composite sediment sample does not indicate the presence of either TCDD or the presence of TCP or HCB in excess of their cleaning levels, Hooker shall not be required to take any further action pursuant to this paragraph;

(d) In the event analysis of such composite

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sediment sample indicates the presence of TCDD, but the absence of TCP and HCB in excess of their cleaning levels, Hooker shall make a written submission to EPA/State, along with all underlying data, showing that the TCDD detected in the composite sediment sample described in subparagraph (2)(a) did not migrate from the Landfill Site. If EPA/State thereafter does not proceed as described in subparagraph (2)(e), Hooker shall not be required to take any further action pursuant to this paragraph; and

(e) Following Hooker's submission described in subparagraph (2)(d), EPA/State may petition the Court within 60 days of such submission to require Hooker to proceed as described in subparagraphs C(8) and C(9); provided, however, that in no event shall Hooker be required to so proceed unless it is determined that TCDD has migrated from the Landfill Site.

(3) Within 90 days after the effective date of this Judgment, but in no event prior to May 30, 1981, Hooker shall fence and post with advisory signs all accessible areas described in subparagraph (1) near New Road and the shore area. Hooker shall maintain such fences and signs until Hooker is not, pursuant to subparagraphs (2)(c) or (2)(d), required to take any further action pursuant to this paragraph. R-5

HAUL ROADS

J. During the construction activities associated

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with the Containment Program, haul roads and staging areas shall be constructed and utilized. Existing roads shall also be utilized, where appropriate, and shall be cleaned following completion of construction activities associated with the Containment Program. Upon completion of construction activities associated with the Containment Program, those haul roads and staging areas adjacent to Bloody Run which are unnecessary to implement maintenance activities will be removed and replaced with uncontaminated soil and seeded where appropriate.

DISPOSITION OF EXCAVATED MATERIAL

K. To the maximum extent practicable, soils excavated pursuant to Paragraph B shall be deposited at that portion of the toe of the Landfill Site which is closest to the point of excavation, as shown on Figure 19. Other material removed or replaced pursuant to the Containment Program shall also be deposited at such location provided that adequate space is available. The areas where soils are so deposited shall be covered with a cap having the same design characteristics as the Landfill Site cover described in Paragraph L(1) and feathered into the existing Landfill slope, as shown on Figure 19. In the event such soils or other material are not disposed of in the manner described above, a portion of the Landfill Site west of a line between manhole numbers 3 and 10, as shown on the cross-hatched area of Figure 20,

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shall be reopened and such soils or other solid materials shall be deposited in such reopened portion.

SITE CLOSURE

L. The final closure of the Landfill Site shall proceed as follows: C-12

(1) The Landfill Site, including that portion of the Landfill Site reopened for disposition of materials pursuant to Paragraph K, shall be crowned and covered with clay and topsoil. The cover shall consist of at least:

(a) thirty-six inches of clay compacted in six-inch layers to a maximum permeability of 1×10^{-7} cm/sec;

(b) one six-inch layer of sand tilled into the clay; and

(c) one six-inch layer of topsoil seeded with native vegetative growth.

(2) To verify compliance with the preceding subparagraph, the following actions will be taken:

(a) before construction, the clay to be used for the cover will be tested; permeabilities at various soil compaction densities will be determined, and the density required to attain a maximum permeability of 1×10^{-7} cm/sec will be identified;

(b) during construction, the clay used for the cover will be evaluated before it is placed to insure

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the material meets specifications; and the compacted density in each six-inch layer will be tested to insure it meets requirements to attain the specified permeability; and

(c) after construction, six undisturbed samples (Shelby Tubes) will be collected at representative locations and density tested; and the thickness of the clay cover and topsoil also will be verified at these six locations.

(3) The Landfill Site shall be crowned by the construction of one or more apexes, each of which slopes at a minimum of five percent grade toward a run-off drainage ditch having a minimum one percent grade.

(4) The foregoing subparagraphs shall be inapplicable to those portions of the Landfill Site presently capped and graded in accordance with subparagraphs (1), (2), and (3) herein and not reopened pursuant to Paragraph K.

(5) The Landfill Site shall be secured, as shown in Figure 21, by a permanent chain-link fence.

(6) The Landfill Site shall be posted with appropriate advisory signs.

(7) The Landfill Site shall be marked with Hooker-surveyed benchmarks.

OFF-SITE PARTICULATE MIGRATION

M. Notwithstanding any other provision of this Judgment, in the event that airborne particulates containing chemicals migrated from the Landfill Site prior to

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the effective date of this Judgment and such migration is determined, by stipulation of EPA/State and Hooker or by order of this Court, to constitute an endangerment to human health and the environment in or near the Hyde Park - Bloody Run Area, Hooker shall initiate corrective action as soon as possible to clean up such particulates and take other appropriate actions incident thereto which are required to protect human health and the environment. In no event shall Hooker be required to take any action pursuant to this paragraph unless the Court finds (1) that the aforementioned airborne particulate migration violates applicable federal or state law, (2) that the petitioning party has met the standard of proof that would ordinarily apply in a de novo Court proceeding to obtain the relief sought, and (3) that any technological relief sought can be implemented using Requisite Remedial Technology.

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(2) For the purposes of continuing definition of a plume of chemical migration, if any, monitoring activities proposed and adopted pursuant to subparagraph C(8)(f) of Addendum I shall be implemented in accordance with the schedule provided therein.

BARRIER-COLLECTION SYSTEMS MONITORING

C. Prior to 90 days after completion of the Bedrock Barrier-Collection System, Hooker shall install the following monitoring wells and piezometers as shown in Figure 23: G-23

(1) Four overburden monitoring wells screened over the entire depth of the Overburden; 4

(2) Seven monitoring wells of comparable specific capacities screened over the upper 15-foot depth of the Lockport Bedrock Zone; 7

(3) Eight piezometers in the Overburden; ?

(4) Four piezometers at the interface between the Overburden and the Weathered Zone; and

(5) Nine upgradient and nine downgradient piezometers set in six clusters of three piezometers each, installed to levels five, ten, and fifteen feet below the top of the Lockport Bedrock Zone. In the event that the Bedrock Barrier-Collection System consists of a system of purge wells, certain of these piezometers described in this subparagraph and such additional piezometers as may be necessary to measure G-18

ADDENDUM II: MONITORING PROGRAM

INTRODUCTION

A. Hooker shall undertake the monitoring activities described in Addendum I and the monitoring program ("Monitoring Program") described in Paragraphs B through N, subject to all the terms and conditions of this Judgment; nothing in this paragraph shall modify or alter Hooker's monitoring obligations under Addendum I or under the Monitoring Program. The purpose of the monitoring activities described in Addendum I and the Monitoring Program is to monitor the effectiveness of the Containment Program undertaken pursuant to this Judgment.

SAMPLING OF EXISTING AND PLUME DEFINITION WELLS

B.(1) ~~Prior to~~ the installation of the Bedrock Barrier-Collection System, samples from the following wells shall be collected twice, once during the historical wet period and once during the historical dry period: existing wells OW-1, OW-4, OW-7, OW-11, OW-13, OW-16, OW-18, OW-20, OW-22, OW-24, OW-26, OW-28, OW-30, and OW-31, as shown on Figure 22, and any other well(s) downgradient of the Landfill Site which Hooker has installed in the Lockport Bedrock Zone as of the effective date of this Judgment. Such samples shall be analyzed for the parameters described in Paragraph F at the indicated monitoring levels.

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the effectiveness of the purge well system shall be installed between such purge wells.

D.(1) Representative samples of liquids (both aqueous and non-aqueous phases which may be present) shall be collected at the following frequency from the Existing Barrier-Collection System, commencing 30 days after the effective date of this Judgment, and from the Overburden Barrier-Collection System and the Bedrock Barrier-Collection System, commencing 90 days after installation of such systems:

- (a) Monthly during the first year;
- (b) Quarterly during the second and third years;
- (c) Semi-annually during the fourth year; and
- (d) Annually thereafter.

(2) Representative samples of liquids (both aqueous and non-aqueous phases which may be present) shall be collected annually from the wells described in subparagraph C(1), commencing 90 days after installation of such wells.

(3) Representative samples of liquids (both aqueous and non-aqueous phases which may be present) shall be taken at the following frequencies from the wells described in subparagraph C(2), commencing 90 days after installation of such wells:

- (a) Monthly during the first year;
- (b) Quarterly thereafter until two years after stabilization as defined in Paragraph I has occurred; and

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(c) Annually thereafter; provided, however, that the wells described in subparagraph C(2) which are immediately downgradient of the Bedrock Barrier-Collection System shall be sampled semi-annually thereafter.

(4) Water table elevations or potentiometric surface measurements, as appropriate, shall be taken at the following frequencies at each of the monitoring wells and piezometers described in Paragraph C:

- (a) Monthly during the first year; and
- (b) Quarterly thereafter.

E. Samples shall also be collected from surface runoff and sediment in the diversion channel described in Paragraph G of Addendum I or in Bloody Run as described in Paragraph H of Addendum I. These samples shall be taken according to the following schedule for the first three years: (1) from surface runoff - quarterly (seasonal where there is discernible runoff) and (2) from sediment - semi-annually. After the first three years, such samples shall be taken annually. F 22

F. Each water sample collected pursuant to Paragraphs B, D and E shall be analyzed for the following indicator parameters at the stated Monitoring Levels: P-6

<u>Parameters</u>	<u>Monitoring Level</u>
Conductivity	--
pH	(0.1 unit)
Chloride	1,000 ug/L
Total Organic Carbon	200 mg/L

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<u>Parameters</u>	<u>Monitoring Level</u>
Total Organic Halogen	0.5 mg/L
Phenol	10 ug/L
Monochlorobenzene	10 ug/L
Monochlorotoluenes	10 ug/L
Trichlorobenzenes	10 ug/L
Tetrachlorobenzenes	10 ug/L
Hexachlorobutadiene	10 ug/L
Hexachlorocyclopentadiene	10 ug/L
Monochlorobenzotrifluorides	10 ug/L
2,4,5-Trichlorophenol	10 ug/L
Hexachlorocyclohexanes	10 ug/L

G. Each sediment sample taken pursuant to Paragraph E shall be analyzed for the parameters described below at the indicated Sediment Monitoring Levels:

<u>Parameters</u>	<u>Sediment Monitoring Levels</u>
Monochlorotoluenes	10 ug/kg
Monochlorobenzene	10 ug/kg
2,4,5-Trichlorophenol	100 ug/kg
Hexachlorobenzene	100 ug/kg

H. Using hydraulic and chemical data collected from bedrock wells and piezometers described in Paragraph C, chemical loading (hereinafter "Chemical Loading") shall be calculated for each period during which samples are collected and analyzed pursuant to Paragraphs D and F. Chemical Loading is defined as the total mass flow of the specific chemicals described in Paragraph F. A Chemical Loading shall be calculated for the upper 15 feet of the Lockport Bedrock Zone immediately down-gradient of the Bedrock Barrier-Collection System and a Chemical Loading shall also be so calculated immediately upgradient of the Bedrock Barrier-Collection System. The calculation of such

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downgradient Chemical Loading shall take appropriate account of the impact on such measurements of chemicals which were present downgradient of the Bedrock Barrier-Collection System prior to installation of such system.

I. Following installation of the Bedrock Barrier-Collection System, Hooker shall annually make a determination whether the hydrogeologic and chemical environment at the Land-fill Site has stabilized; provided, that, in any event, such stabilization (hereinafter "Stabilization") shall be deemed to have occurred no later than the first day of the sixth year after installation of the Bedrock Barrier-Collection System. Such annual determination shall take account, utilizing generally accepted and scientifically reliable statistical techniques, of the hydraulic and chemical data collected and analyzed pursuant to this Addendum. Within ~~seven working~~ days following such determination, Hooker shall submit to EPA/State the basis for its determination, with all underlying data. In the event modifications of the Bedrock Barrier-Collection System pursuant to Paragraph D of Addendum I are thereafter required, Stabilization shall be redetermined in the manner described above.

J.(1) After Stabilization, the Bedrock Barrier-Collection System shall be deemed to be effective if the downgradient Chemical Loading, calculated quarterly for the first two years and annually thereafter pursuant to Paragraph H,

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is less than 10% of the contemporaneous upgradient Chemical Loading so calculated. The interpretation of the data shall be carried out by comparing, utilizing generally accepted and scientifically reliable statistical techniques, the means of the upgradient and downgradient Chemical Loadings using values obtained from the four most recent consecutive sampling periods. If, as a result of design, installation, operation or maintenance of the Bedrock Barrier-Collection System, the downgradient Chemical Loading continues at more than 10% of the upgradient Chemical Loading for four consecutive sampling periods, Hooker shall so advise EPA/State within 30 days after the last such sample has been analyzed. Within 60 days after such date, Hooker shall submit to EPA/State a study pursuant to subparagraph C(8) of Addendum I. Thereafter the parties shall proceed in accordance with subparagraph C(9) of Addendum I.

(2) (a) If, after at least one year following Stabilization, the most recent downgradient Chemical Loading exceeds by at least 10% the mean of the four immediately preceding Chemical Loadings, Hooker shall commence quarterly sampling and analysis of the downgradient wells described in subparagraph C(2). ~~Such quarterly sampling may cease,~~ and semi-annual sampling shall resume, when four consecutive downgradient Chemical Loadings show a level or negative slope of the mean of the four immediately preceding Chemical Loadings calculated utilizing generally accepted and scientifically reliable statistical

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techniques.

(b) If, at any time following Stabilization, consecutive downgradient Chemical Loadings show an increasing slope of at least 10% per year over three consecutive years, or if the mean of ~~four consecutive downgradient Chemical Loadings~~ exceeds by 50% the downgradient Chemical Loadings which existed at the time of Stabilization, Hooker shall so advise EPA/State within 30 days after the last such sample has been analyzed. Such slope shall be determined utilizing generally accepted and scientifically reliable statistical techniques. Chemical Loading which "existed" at the time of Stabilization shall be defined for the purposes of this subparagraph as the mean of the four consecutive Chemical Loadings immediately following Stabilization. Within 120 days after the aforementioned notification, Hooker shall submit to EPA/State a study pursuant to subparagraph C(8) of Addendum I describing what Requisite Remedial Technology, if any, is required. Thereafter, the parties shall proceed in accordance with subparagraph C(9) of Addendum I.

(3) If the samples collected pursuant to Paragraph E reveal that chemical concentrations exceed the monitoring levels specified in Paragraph F or G, as appropriate, Hooker shall so advise EPA/State within seven working days and initiate appropriate corrective action. If analysis of such data continues to reveal that such chemical concentrations exceed

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monitoring levels for four consecutive monitoring periods, Hooker shall so advise EPA/State within 30 days after the last such sampling. Within 60 days after such date, Hooker shall submit to EPA/State a study pursuant to subparagraph C(8) of Addendum I. Thereafter, the parties shall proceed in accordance with subparagraph C(9) of Addendum I.

(4) The Overburden Barrier-Collection System shall be deemed to be effective if piezometric measurements, from the piezometers described in Paragraph C, or such other piezometers as may be necessary to measure the effectiveness of such system, show that the hydraulic gradient throughout the Overburden is toward one of the Barrier-Collection Systems. If, at any time, monitoring indicates that the Overburden Barrier-Collection System is not effective, Hooker shall so advise EPA/State within seven working days and initiate appropriate corrective action. Thereafter, if the hydraulic data from four subsequent consecutive monitoring periods show the Overburden Barrier-Collection System is not effective, Hooker shall so advise EPA/State within 30 days after the last such measurement. Within 60 days after such date, Hooker shall submit to EPA/State a study pursuant to subparagraph C(8) of Addendum I. Thereafter, the parties shall proceed in accordance with subparagraph C(9) of Addendum I.

K. To the extent that the generally accepted and scientifically reliable statistical techniques described in

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Paragraphs I and J include the use of confidence levels, the 95% confidence level shall be utilized.

LANDFILL SITE MONITORING

L. Within ~~180 days~~ after the effective date of this Judgment, five piezometers shall be installed within the Landfill Site, but in no event below the top of the Weathered Zone, at points known to have been historical disposal locations. The presence of non-aqueous phase liquids, if any, shall be identified in the field by visual and olfactory evidence. Water table elevations shall be taken monthly during the first year following installation of such piezometers, quarterly for the second year, semi-annually for the third year, and annually thereafter.

BLOODY RUN MONITORING

M. Prior to ~~90 days~~ after completion of the Containment Program relating to Bloody Run, Hooker shall install four monitoring wells as shown in Figure 24, to a depth of 15 feet into the Lockport Bedrock Zone and screened over the entire 15-foot depth. One of these wells shall be placed east of Bloody Run and three of these wells shall be placed west of Bloody Run, as shown on Figure 24.

N. Commencing 90 days after installation, samples shall be collected from the wells described in Paragraph M

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quarterly during the first year; semi-annually during the second and third years; and annually thereafter.

O. All water samples described in Paragraph N will be analyzed for the parameters described below at the indicated Bloody Run Monitoring Levels:

<u>Parameters</u>	<u>Bloody Run Monitoring Levels</u>
Monochlorotoluenes	10 ug/L
Monochlorobenzene	10 ug/L
2,4,5-Trichlorophenol	10 ug/L
Hexachlorobenzene	10 ug/L

P. If, after Stabilization, the analysis of the data collected from the wells described in Paragraph M reveals that chemical concentrations in such wells exceed the Bloody Run Monitoring Levels, Hooker shall commence sampling and analyze the monitoring wells described in Paragraph M quarterly for the parameters described in Paragraph O. Such analysis shall take appropriate account of the impact on such measurements of the chemicals which were present in the area prior to completion of the Containment Program relating to Bloody Run. Such quarterly sampling may cease, and annual sampling shall resume, when the parameters are observed below the Bloody Run Monitoring Levels for four consecutive periods. If chemicals migrating from the Bloody Run basin are observed at concentrations above the Bloody Run Monitoring Levels for four consecutive sampling periods, Hooker shall so advise EPA/State within seven days after the last such sample is analyzed. Thereafter, Hooker shall not be

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required pursuant to this Judgment to take any action to address migration of chemicals from the Bloody Run basin. However, if the chemicals attributable to Hooker are detected migrating from the Bloody Run basin at levels above the Bloody Run Monitoring Levels, and if EPA/State demonstrates that such migration violates applicable federal or state statutes or regulations, EPA/State may petition the Court within 60 days to require Hooker to proceed as described in subparagraphs C(8) and C(9) of Addendum I; provided, however, that in no event shall Hooker be required to apply Requisite Remedial Technology to address such migration unless the petitioning party meets the standard of proof that would ordinarily apply in a de novo Court proceeding to obtain the relief sought.

TERMINATION

Q. The monitoring activities described in Paragraphs C through K (Barrier-Collection Systems Monitoring), Paragraph L (Landfill Site Monitoring), Paragraphs M through P (Bloody Run Monitoring), and the monitoring activities established in accordance with subparagraphs C(8)(f) and (j) of Addendum I shall continue for a period of three years following the date(s) on which operation and maintenance activities are terminated pursuant to Paragraph F of Addendum III.

ADDENDUM III: MAINTENANCE PROGRAM

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The Maintenance Program shall consist of the following:

A. Maintenance of the integrity, slope, vegetation and drainage structures in (1) the area bounded by the security fence described in Paragraph L of Addendum I, including, at least weekly inspections of the area along the inside and outside of such fence; and (2) all areas capped, covered or plugged pursuant to Paragraphs B, G and H(2) of Addendum I, including weekly inspections thereof.

B. Maintenance of all facilities within Hooker's control (including any facilities on property for which Hooker has obtained an easement, right of way, or right of entry) to the extent required to effectuate the activities required under the Containment and Monitoring Programs.

C. Maintenance of all surveyed benchmarks at the Site.

D. Maintenance of the security fence described in Paragraph L of Addendum I.

E. Maintenance of advisory signs described in Paragraph L of Addendum I.

F. (1) Except as provided in Paragraph G, all operation and maintenance activities undertaken in order to comply with the terms and conditions of this Judgment shall continue for a period of 35 years following the effective

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date of this Judgment; provided, however, that Hooker may terminate operation of any of the Barrier-Collection Systems or any components thereof, if:

(a) Over a period of four consecutive years no specific chemical parameter listed in Paragraph F of Addendum II has been detected at more than 10 ug/L in liquids collected by such system or component thereof; and

(b) Such termination shall not interfere with the effective operation of the remaining Barrier-Collection Systems or any component thereof;

(c) Provided, however, that if monitoring subsequent to termination under this subparagraph reveals levels for any specific chemical parameter listed in Paragraph F of Addendum II at more than 10 ug/L, such terminated operations shall be resumed.

(2) Prior to any termination under subparagraph (1), Hooker shall make a submission to EPA/State describing the basis for its conclusion, along with all underlying data, that such termination is consistent with this paragraph. Thereafter, if the parties do not agree, the parties shall proceed as described in subparagraph C(9) of Addendum I.

G. All or part of the Maintenance Program may be extended upon satisfactory showing to the Court by EPA/State that such extension is necessary to effectuate the purposes and goals of this Judgment.

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ADDENDUM IV: GUARANTEE

GUARANTEE, made this _____ day of _____, 1981, by OCCIDENTAL PETROLEUM CORPORATION, a California corporation, of Los Angeles, California, (hereinafter called "Occidental"), to the UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (hereinafter "EPA") and THE STATE OF NEW YORK (hereinafter "State").

1. General Agreement.

The EPA and the State have entered into a Stipulation and Judgment Approving Settlement Agreement (hereinafter "Judgment") in a case filed in the Federal District Court for the Western District of New York, Civil Action No. 79-989 (Hyde Park Landfill), the terms of which require defendant Hooker Chemicals & Plastics Corp., (hereinafter "Hooker") to undertake certain obligations in regard to the containment, monitoring, and maintenance of the Hyde Park - Bloody Run Area. EPA and the State entered into this Judgment on the condition that Hooker obtain this Guarantee from Occidental.

2. Liabilities Defined.

The term "liability," as used in this Guarantee shall mean the cost of containment, monitoring, and maintenance of the Hyde Park - Bloody Run Area pursuant to the Judgment. Such liability shall accrue only after the Federal District Court for the Western District of New York finds that Hooker

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or any transferee of Hooker as described in Paragraph 12 of the Judgment cannot perform or cause to be performed its obligations pursuant to this Judgment due to its insolvency or like financial condition.

3. Guarantee.

Occidental guarantees to EPA and the State the payment of such liability within ninety (90) days of demand therefor.

4. Duration.

The obligation of Occidental hereunder shall continue for a period of thirty-five (35) years from the date of entry of the Judgment, except as provided in Paragraphs F and G of Addendum III of the Judgment. At the expiration of such time, Occidental's obligation hereunder shall terminate.

5. Maximum of Guarantee.

Occidental shall be liable for a maximum amount of Ten Million Dollars (\$10,000,000) under this Guarantee, and the payment of such amount shall fully discharge Occidental's obligations hereunder; provided, however, that following completion of construction activities associated with the Containment Program described in the Judgment, such maximum amount shall be ^{for} (\$5,000,000).

6. Modification.

The duration of the Guarantee as provided in Paragraph 4 and the maximum amount of the Guarantee as provided in

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Paragraph 5 may be modified, pursuant to Paragraph 12 of the Judgment, upon satisfactory showing to the Court by EPA or the State that such modification is necessary in order to secure Hooker's obligations pursuant to the Judgment. In no event may this instrument be modified or amended orally.

7. Assignment.

This Guarantee may be assigned by Occidental to any person or entity; provided, however, that EPA and the State each agree in writing to such assignment. Such agreement of EPA and the State shall not be unreasonably withheld.

8. Successors and Assigns.

This Guarantee shall bind and inure to the benefit of all parties hereto and their respective successors and assigns.

9. Consent to Jurisdiction.

Occidental consents to the jurisdiction of the Federal District Court for the Western District of New York should any action to enforce or modify this Guarantee be necessary, but solely for this purpose.

OCCIDENTAL PETROLEUM CORPORATION

By: _____

Its _____

ADDENDUM V:

ENVIRONMENTAL HEALTH AND SAFETY PLAN

INTRODUCTION

A. (1) This Environmental Health and Safety Plan (hereinafter "Safety Plan") shall consist of the obligations set forth below, subject to all the terms and conditions of the Judgment; nothing in this subparagraph shall modify or alter those obligations. This Safety Plan has been designed, and has as its purpose, to provide extraordinary precautions (a) to protect the health of On-Site Personnel and Visitors (as defined below) during the excavation, transportation, disposal and capping of soils and sediments which may contain a number of chemicals, including tetrachlorodibenzo-p-dioxins (TCDD), and (b) to protect human health and the environment outside the immediate area of such activities by controlling the airborne dispersion of particulates during such activities.

(2) This Safety Plan incorporates by reference the requirements of the Occupational Safety and Health Act (OSHA), 29 C.F.R. Part 1910. The Safety Plan also contains requirements in addition to OSHA regulations. Procedures required by OSHA or by this Safety Plan may be further supplemented by the Safety Officer (as defined below). Hooker shall be responsible for implementation of and compliance with this Safety Plan.

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(3) This Safety Plan recognizes the particular need for protection of human health and the environment in the Hyde Park - Bloody Run Area, taking account of (a) the chemicals that may be present in such area and (b) the specific activities required by the Containment Program.

(4) By execution of this Judgment, the governmental parties hereto stipulate that the provisions of the Safety Plan relating to Special Construction Activity (as defined herein) are consistent with applicable statutes and regulations and that EPA has reviewed and approved such provisions pursuant to 40 C.F.R. 775.

(5) Plans, specifications, and protocols for this Safety Plan shall be submitted to EPA/State pursuant to the provisions of Paragraph 7 of the Judgment. Such plans, specifications, and protocols shall take appropriate account of the nature of chemicals, including TCDD, being handled and shall be consistent with the provisions of the Safety Plan.

DEFINITIONS

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B. For the purpose of this Safety Plan, the following definitions shall apply:

(1) "Site" - The Site is the construction and soil and sediment disposal area where activities required by the Containment Program take place. Boundaries of the Site shall be established in the field by Hooker.

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(2) "Working Site" - The Working Site is that designated portion of the Site where Special Construction Activity other than transportation on haul roads is in progress. Boundaries of the Working Site shall be established by Hooker in the field as construction progresses.

(3) "Special Construction Activity" - Special Construction Activity is that activity required pursuant to the Containment Program which involves the excavation, transportation, and disposal of soils or sediments which may contain chemicals in concentrations in excess of the soil survey levels described in Paragraph B(1) of Addendum I, or activity required pursuant to the Containment Program which involves the initial phases of capping activity when the soils to be capped have not yet been covered with any capping material.

(4) "On-Site Personnel" - On-Site Personnel consists of all employees of Hooker or its contractors, or individuals designated as On-Site Personnel by the EPA/State Coordinators, assigned to work at the Site.

(5) "Visitor" - A Visitor is a person other than On-Site Personnel whose presence is authorized at the Site.

(6) "Safety Officer" - The Safety Officer is an individual designated as such by Hooker, subject to reasonable objection by EPA/State. The Safety Officer shall have

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a sound working knowledge of state and federal occupational safety and health regulations and formal training or work experience in occupational safety. The Safety Officer shall be responsible for the day-to-day implementation of and compliance with this Safety Plan, shall have authority to order work to be suspended at the Site, and shall inform EPA/State of any such work suspension of more than 24 hours duration. The Safety Officer shall also assure that all On-Site Personnel have been informed of the nature of the risk of chemical exposure associated with construction activity and appropriate measures to protect against such exposure.

MEDICAL EXAMINATIONS

L-5

C. (1) Medical examinations of all On-Site Personnel shall be conducted at the commencement and completion of each individual's employment at the Site. In addition, each On-Site Personnel employed at the Working Site shall receive a medical examination six months after the commencement of such individual's employment at the Working Site and all On-Site Personnel at the Working Site, regardless of length of employment, shall receive, at such individual's option, a follow-up medical examination one year after such individual no longer is employed at the Working Site. At the completion of each On-Site Personnel's employment at the Working Site, the Safety

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Officer shall provide each such individual with written notification of the availability of such a follow-up medical examination. The results of the medical examinations shall be retained by the physician or physician group performing the examinations. Hooker shall comply with any OSHA regulations regarding the retention of medical or other records which are required as a result of Special Construction Activity. Upon request to his examining physician or physician group, each On-Site Personnel shall be furnished with a copy of such individual's examinations.

(2) (a) Medical examinations given to On-Site Personnel pursuant to subparagraph (1) shall include, without limitation, a chest x-ray and a blood profile (i.e., chloride, CO₂, K, Na, BUN, glucose, globulin, total protein, albumin, calcium, alkaline phosphatase, cholesterol, triglyceride, uric acid, creatinine, total bilirubin, phosphorous LDH, SGPT, SGOT, fasting blood sugar, hepatitis antigen, and 5'-nucleotidase).

(b) Medical examinations given to On-Site Personnel at the Working Site shall include, in addition to those tests described in subparagraph (a), (i) a medical examination identical to that administered to all Hooker employees who are involved in the handling of chemicals; (ii) organic function tests for taste, smell, reaction time, and standardized tests, if any, generally accepted by the medical profession, which test for the metabolism of the organic

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chemicals listed below; and (iii) body fluid analyses for the organic chemicals listed below at the indicated detection levels:

<u>Chemical</u>	<u>Blood Detection Levels</u>	<u>Urine Detection Levels</u>
Benzene	2 ug/L	--
Tetrachloroethylene	2 ug/L	--
Monochlorotoluenes	2 ug/L	--
Monochlorobenzene	1 ug/L	--
2,4,5-Trichlorophenol	10 ug/L	10 ug/L
Hexachlorobenzene	0.1 ug/L	0.1 ug/L

(3) Hooker shall establish and maintain a registry consisting of each On-Site Personnel's name and address, as well as the name and address of such individual's examining physician or physician group. Copies of such registry shall be transmitted to EPA/State one year after completion of the Containment Program.

(4) The results of the medical examinations shall be reviewed by the examining physician or physician group and appropriate action shall be taken to protect the health of On-Site Personnel.

PERSONAL EQUIPMENT, CLOTHING, AND HYGIENE

D. All On-Site Personnel and Visitors shall be provided with, and shall wear, appropriate personal safety equipment and protective clothing. All such equipment and clothing shall be kept clean, shall be maintained in proper

V-7

condition and shall remain at the Site. On-Site Personnel shall shower at the Site upon leaving the Working Site.

SITE SECURITY

2-5

E. Hooker shall provide for the following security at the Site prior to and during construction activity associated with the Containment Program:

(1) The Site shall be fenced to prevent vehicular access and to restrict unauthorized persons from entering the Site.

(2) The Site shall be regularly patrolled by security personnel on a 24-hour basis.

(3) All On-Site Personnel at the Site shall wear photographic identification cards.

(4) Access to the Site shall be limited to On-Site Personnel and Visitors with proper identification; access to the Working Site shall be limited to authorized On-Site Personnel.

(5) Continuous On-Site security logs shall be maintained.

(6) Signs posted on the fence surrounding the Site shall advise that it is a restricted construction area where contaminated materials are being handled and that unauthorized entry is prohibited.

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MATERIAL ACCESS AND REMOVAL

L-5 J-2

F. (1) Construction materials required for Special Construction Activity shall be delivered to a clean staging area at the Site outside the Working Site. Such materials shall then be brought to the Working Site in such a manner as to minimize the potential for particulate dispersion from the Working Site.

(2) Vehicles, equipment and materials brought to the Working Site (other than those brought to the Site for emergency purposes) shall remain at the Working Site until no longer required. Prior to removal from the Working Site, such vehicles, equipment and material shall be cleaned in an enclosed decontamination station utilizing water and/or steam. Cleaning water shall be collected and treated in accordance with Paragraph E of Addendum I.

(3) Vehicular traffic which has moved over contaminated soil shall not be allowed to travel on haul roads or capped areas, until such vehicles have been decontaminated.

PARTICULATE DISPERSION CONTROL

J E

G. The following procedures shall be implemented to minimize airborne dispersion of particulates during Special Construction Activity:

(1) (a) During excavation, the excavation

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face and the immediately surrounding areas thereto at the Working Site shall be kept moist by a water misting system. Such misting shall include wetting of the excavation equipment. Prior to daily commencement of excavation activity, the equipment and excavation face shall be thoroughly wetted. Hooker may, at its option, utilize a method of particulate suppression which is at least as effective as a water misting system. Any time excavation activity ceases, open excavated areas and excavated materials shall be covered to prevent particulate dispersion.

(b) During initial capping activity, any area where material has been removed during Special Construction Activity to permit capping shall be kept moist by a water misting system. Such misting shall include wetting of the equipment used in such capping activity. Any time capping activity ceases, disturbed areas on the Work Site where capping material has not yet been placed shall be covered to prevent particulate dispersion.

(2) Soil requiring transportation from the Working Site to the Landfill Site over haul roads shall be transported in tightly covered watertight containers.

(3) Once each day, and more frequently if required, road dust on haul roads used for Special Construction Activity shall be controlled through application of appropriate

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particulate control agents. Road cleaning shall also be conducted, where appropriate, utilizing vacuum sweepers. Public use of such haul roads outside the Site shall be prohibited during their actual use for Special Construction Activity and thereafter until such cleaning and application of particulate control agents occurs.

(4) Soil transported to the Landfill Site over haul roads shall be unloaded at designated transfer areas from which the soil shall be removed daily for disposal and covering. Any excavated soil remaining at designated transfer areas at the end of a working day shall be covered to prevent particulate dispersion. Until such soil is covered or disposed of as described above, it shall be kept moist.

(5) Soil excavated from the Landfill Site perimeter which is moved to the toe of the Landfill Site for disposal shall be kept moist using a water misting system at all times until such material is capped or covered.

(6) Plans, specifications, and protocols submitted in conjunction with the procedures described above shall include the results of a field test demonstrating that such procedures are capable of preventing the airborne dispersion of particulates from the Working Site at levels in excess of those described in Paragraph J.

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CONFINED SPACE ACTIVITY

62-5

H. (1) Special Construction Activity in confined spaces (e.g., trenches, manholes, sewers, and the like) shall be carried out as described below.

(2) During Special Construction Activity in confined spaces:

(a) the confined space shall be monitored for any flammable condition prior to entry by On-Site Personnel.

(b) On-Site Personnel shall be clothed with impervious clothing while working in the confined space. Such clothing shall prevent any dermal exposure.

(c) On-Site Personnel shall use a pressure-demand type full face respirator (1980 ANSI standard Z 88.2) to provide a clean air supply while working in the confined space.

(d) On-Site Personnel working in wet wells or manholes shall wear a safety harness with rope which shall be tended by a co-worker.

EMERGENCY EQUIPMENT AND PROCEDURES

L-2

I. (1) Prior to commencement of Special Construction Activity, the Safety Officer shall prepare an emergency plan (hereinafter "Emergency Plan") which establishes procedures to be implemented during defined emergencies at the Site.

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The Emergency Plan shall be posted at the Site, all On-Site Personnel shall be trained in such emergency procedures, and each of the entities described in subparagraph L(3) shall be provided with a copy of the Emergency Plan.

(2) The Site shall contain appropriate emergency equipment, including, without limitation, emergency showers, eye-wash stations, fire extinguishers, and first aid facilities. On-Site Personnel trained in first aid techniques shall be present at the Site at all times during Special Construction Activity.

MONITORING

J. Hooker shall monitor conditions at the Site during Special Construction Activity through continuous monitoring of (1) organic vapors, (2) flammability, and (3) particulates, as described below.

(1) Organic vapor levels shall be monitored at the Working Site by use of a photoionization detector or its performance equivalent and a field gas chromatograph (GC) or its performance equivalent. The GC shall be used to monitor for trichloroethylene and benzene at levels of 100 ppm and 10 ppm, respectively. If either level is exceeded, construction activity at the Working Site shall be suspended immediately and suitable corrective action shall be implemented before such construction activities resume.

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(2) Flammability shall be monitored at the Working Site by use of a combustible vapor analyzer or its performance equivalent. Construction activity at the Working Site shall proceed only when vapor concentrations are below the lower explosive limit. If the lower explosive limit is exceeded, all construction activity at the Working Site shall be suspended immediately and corrective action shall be implemented before such construction activities resume.

(3) Particulate levels shall be monitored at the perimeter of the Site by use of integrating nephelometers or their performance equivalent. If the integrating nephelometers indicate that particulates are migrating from the Working Site at levels which reflect a statistically significant increase over background for a fifteen minute duration, Special Construction Activity shall be suspended immediately and corrective action shall be implemented. Statistical significance, as used in this paragraph, shall be calculated at the 95% confidence level using generally accepted and scientifically reliable statistical techniques. Special Construction Activity at the Working Site shall not resume until such particulate concentrations no longer exceed such level.

(4) (a) Particulate levels shall be monitored at the perimeter of the Site by the use of dichotomous samplers or their performance equivalent. Such sampling devices

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shall provide integrated filter samples (in the 0.1 um-2.5 um and 2.5-15 um range) for the determination of particulate concentration and for analysis of the MCT, MCB, TCP, and HCB content of such particulates. During Special Construction Activity, samples shall be collected daily, and analyzed, as necessary, as expeditiously as possible.

(b) If samples collected pursuant to subparagraph (a) indicate (i) particulates migrating from the Working Site as a result of Special Construction Activity at levels which reflect a statistically significant increase over background and (ii) MCT, MCB, TCP, or HCB concentration levels in such particulates in excess of the levels listed in Paragraph G of Addendum II, for any three days during the most recent 30 days of Special Construction Activity or for any six days during the most recent 12 months of Special Construction Activity, such activity shall be suspended immediately and EPA/State so notified. Within 30 days thereafter, Hooker shall submit to EPA/State a study described in subparagraph C(8) of Addendum I to determine what Requisite Remedial Technology, if any, is required to address such excess particulate levels. The technologies so studied shall include, without limitation, the use of a movable weather structure designed to minimize the airborne dispersion from the Working Site of chemicals attributable to the Landfill Site in particulate matter or other media; provided, however, that the

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reference herein, or in the study, to such a movable weather structure shall not create any presumption that such technology exists, that its use is appropriate or required to address the situation under study, that its use is economically justified, or that it constitutes Requisite Remedial Technology. If EPA/State does not advise Hooker pursuant to subparagraph C(9) of Addendum I within 30 days after such submission, Hooker shall expeditiously implement any action proposed therein. If EPA/State so notifies Hooker pursuant to subparagraph C(9) of Addendum I and if, within 30 days thereafter, Hooker does not notify EPA/State of its agreement to undertake the further action described in such written notice, either party may petition the Court, within 30 days after the expiration of the period for Hooker to notify EPA/State, seeking implementation of further action as contained in EPA/State's written advice.

(5) (a) Hooker shall establish ambient air monitoring stations at representative locations beyond the perimeter of the Site. The number and locations of such stations shall be determined using data and methodologies contained in the evaluation described in Paragraph F of Addendum I and other appropriate information. Particulate levels shall be monitored at such locations by the use of dichotomous samplers or their performance equivalent. Such sampling devices shall provide integrated filter samples (in

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the 0.1 um-2.5 um and 2.5-15 um range) for the determination of particulate concentration and for analysis of the MCT, MCB, TCP, and HCB content of such particulates.

(b) During Special Construction Activity, samples described in subparagraph (a) shall be collected daily and analyzed, as necessary, as expeditiously as possible. If, at any time, concurrent samples from at least two monitoring stations indicate (i) particulates at levels which reflect a statistically significant increase over background and (ii) MCT, MCB, TCP, or HCB concentration levels in such particulates in excess of the levels listed in Paragraph G of Addendum II, Hooker shall immediately so notify EPA/State and provide EPA/State with all underlying data relating thereto. Following such notification, Hooker shall, if so requested by EPA/State, immediately suspend all Special Construction Activity for a period of 24 hours. Concurrent with such notification, Hooker shall also advise EPA/State whether such particulates migrated from the Working Site as a result of Special Construction Activity and shall provide EPA/State with the basis for such advice. At the expiration of such 24-hour suspension, or sooner by agreement with EPA/State, Hooker may resume Special Construction Activity unless, prior to such resumption, EPA/State serves on Hooker and files a petition with the Court as soon as possible seeking, as appropriate, (i) a determination that such particulates have migrated from the Working

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Site as a result of Special Construction Activity and (ii) a continuation of the suspension of Special Construction Activity for such period as the Court deems appropriate, but in no event beyond the time of a determination, by the Court, or by agreement of the parties, as to whether temporary relocation pursuant to subparagraph (c) is required. If Hooker and EPA/State agree, or if the Court determines, that such particulates migrated from the Working Site as a result of Special Construction Activity, Hooker shall proceed as described in subparagraphs (c) and (d).

(c) As soon as possible following an agreement or determination described in subparagraph (b), Hooker shall initiate a survey of residential and commercial properties in the vicinity of the monitoring stations which measured the excess concentration levels of particulates described in subparagraph (b). Such survey shall consist of sampling on such properties to determine the presence thereon of particulates containing MCT, MCB, TCP, or HCB in concentration levels in excess of the levels listed in Paragraph G of Addendum II. EPA/State shall immediately be advised of the results of the survey, together with all underlying data. If Hooker and EPA/State agree, or if the Court determines, that particulates containing such excess concentration levels are present on surveyed property, Hooker shall initiate corrective action as soon as possible to clean up such particu-

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lates. Such corrective action shall include, without limitation, immediate notification to the residents of such properties that Hooker shall provide temporary relocation of such residents and shall take actions incident thereto as described in Paragraph L; provided, however, that such temporary relocation shall not be provided if EPA/State and Hooker agree, or the Court determines, that such relocation is unnecessary to protect against endangerment to human health or the environment.

(d) If the temporary relocation of residents is not required pursuant to subparagraph (c), Hooker shall proceed as described in subparagraph (4)(b). If, however, the temporary relocation of residents pursuant to subparagraph (5)(c) is required, Hooker shall suspend or continue to suspend Special Construction Activity and so notify EPA/State. Within seven working days thereafter, Hooker shall make a written submission to EPA/State, along with all underlying data, describing (1) the cause and nature of the circumstances which permitted the dispersion of particulates described in subparagraph (c); (2) the corrective action which Hooker has taken and/or intends to take to address such circumstances; (3) an evaluation whether, in addition to such corrective action, a study described in subparagraph C(8) of Addendum I should be undertaken to determine what Requisite Remedial Technology, if any, is required to address such circumstances.

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If EPA/State does not advise Hooker in writing within seven working days after such submission that it considers the submission inconsistent with the terms and conditions of this Judgment, Hooker shall expeditiously implement all action proposed therein and, thereafter, resume Special Construction Activity suspended hereunder. If, however, EPA/State so advises Hooker on a timely basis, either party may petition the Court within seven working days thereafter to resolve any issues incident thereto, including whether Hooker should be required to proceed as described in subparagraphs C(8) and C(9) of Addendum I. The technologies to be addressed in such study, if required, shall include, without limitation, the use of a movable weather structure designed to minimize the airborne dispersion from the Working Site of chemicals attributable to the Landfill Site in particulate matter or other media; provided, however, that the reference herein, or in the study, to such a movable weather structure shall not create any presumption that such technology exists, that its use is appropriate or required to address the situation under study, that its use is economically justified, or that it constitutes Requisite Remedial Technology. Unless otherwise stipulated between Hooker and EPA/State, or otherwise ordered by the Court, Special Construction Activity suspended hereunder shall not be resumed until completion of corrective action, if any, undertaken pursuant to this study.

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(e) In order to expedite the implementation of procedures described in subparagraphs (b) and (c), Hooker shall submit to EPA/State contingency plans and schedules relating thereto at least 120 days prior to commencement of Special Construction Activity and, thereafter, the parties shall proceed in accordance with Paragraph 7 of the Judgment. Such plans shall include, without limitation, (i) generally accepted and scientifically reliable methodologies to determine whether and to what extent airborne particulates containing MCT, MCB, TCP, or HCB in concentration levels in excess of the levels listed in Paragraph G of Addendum II have migrated from the Working Site as a result of Special Construction Activity; (ii) sampling and survey protocols to be utilized when conducting the property surveys described in subparagraph (c); (iii) procedures to be utilized in notifying the residents and other individuals that property surveying shall occur pursuant to subparagraph (c); (iv) generally accepted and scientifically reliable techniques to be utilized in determining which properties to survey pursuant to subparagraph (c); (v) procedures to be followed in relocating residents, if required, pursuant to subparagraph (c).

L-2

WORK SCHEDULE

K. Except as specifically provided herein, Special Construction Activity may proceed 24 hours per day, seven days per week.

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SAFETY AND SECURITY OUTSIDE THE SITE 2-5

L. Hooker shall provide for safety and security outside the Site as described below:

(1) With regard to any residential properties abutting the Working Site, or any residential properties whose inhabitants are relocated pursuant to subparagraph J(5), Hooker shall:

(a) temporarily relocate residents living on such property and bear reasonable costs for such relocation, including subsistence and lodging, during the times when Special Construction Activity precludes the use of such property;

(b) provide security guards to regularly patrol each such property during such relocation;

(c) seal dwellings on each property abutting the Working Site during such relocation and equip each with a fan, particulate filter and activated carbon purified air supply in order to maintain an internal positive air pressure until reoccupation pursuant to subparagraph (d);

(d) not permit temporarily relocated residents to reoccupy their property until:

(i) particulates on such properties which contain MCT, MCB, TCP, or HCB concentration levels in excess of the levels listed in Paragraph G of Addendum II and which migrated

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from the Working Site as a result of Special Construction Activity, have been cleaned up; and

(ii) sampling, by appropriate analytical techniques, does not indicate the presence of the particulates described in subparagraph (i).

(2) With regard to any commercial establishments abutting the Working Site, Hooker shall:

(a) inform the management of such establishments of Special Construction Activity;

(b) inform such management of the Safety Plan;

(c) restrict Special Construction Activity to within 50 feet of occupied structures on the property of such establishments to the non-working hours of each establishment;

(d) provide suitable alternate parking, as required, for employees of such establishments during Special Construction Activity.

(3) Hooker shall also provide each of the following entities with copies of the Safety Plan and the Emergency Plan:

(a) local hospitals;

(b) local fire departments;

(c) local law enforcement agencies, including the New York State Police.

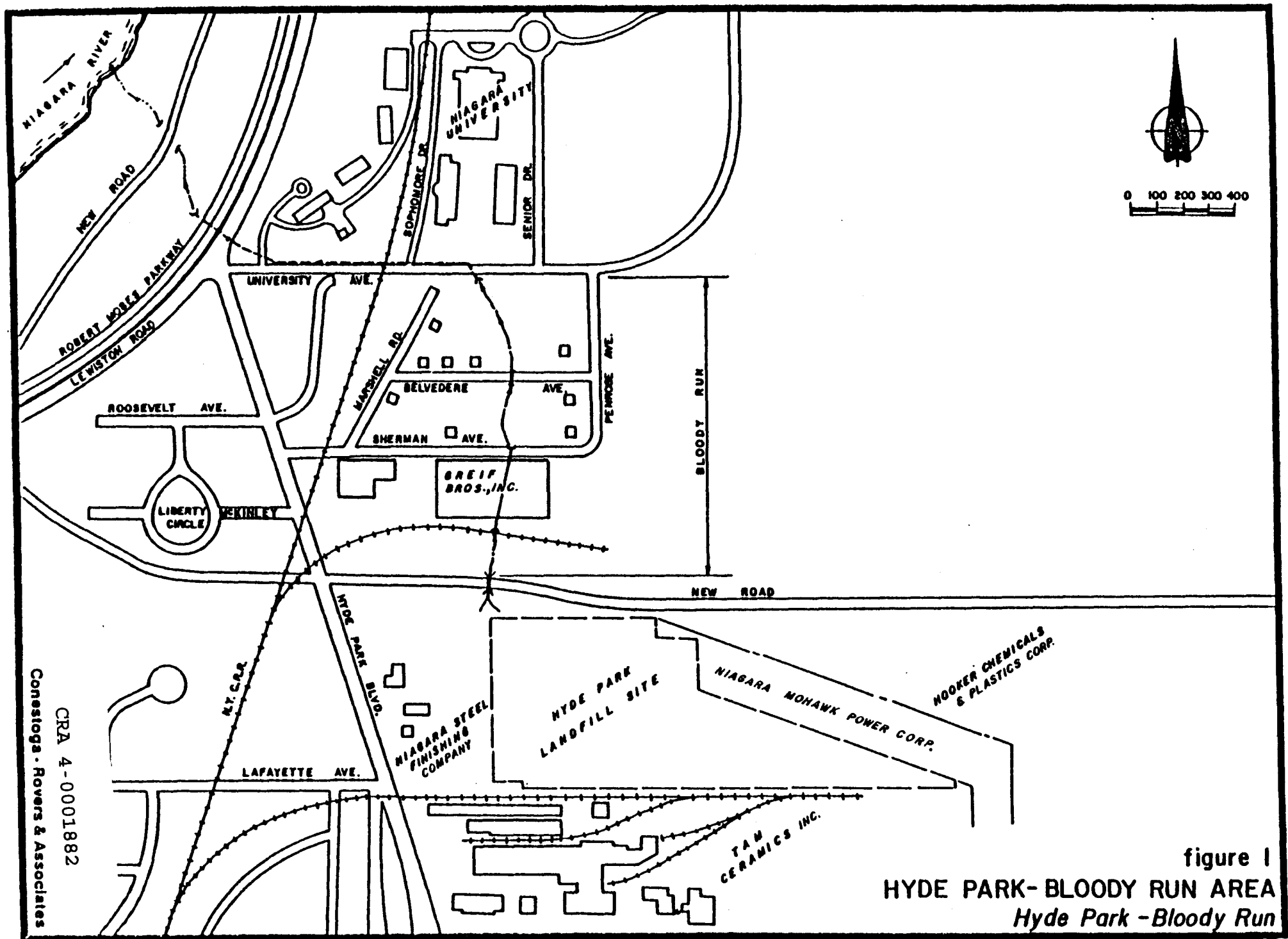


figure 1
HYDE PARK-BLOODY RUN AREA
Hyde Park -Bloody Run

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CRA 4-0001882

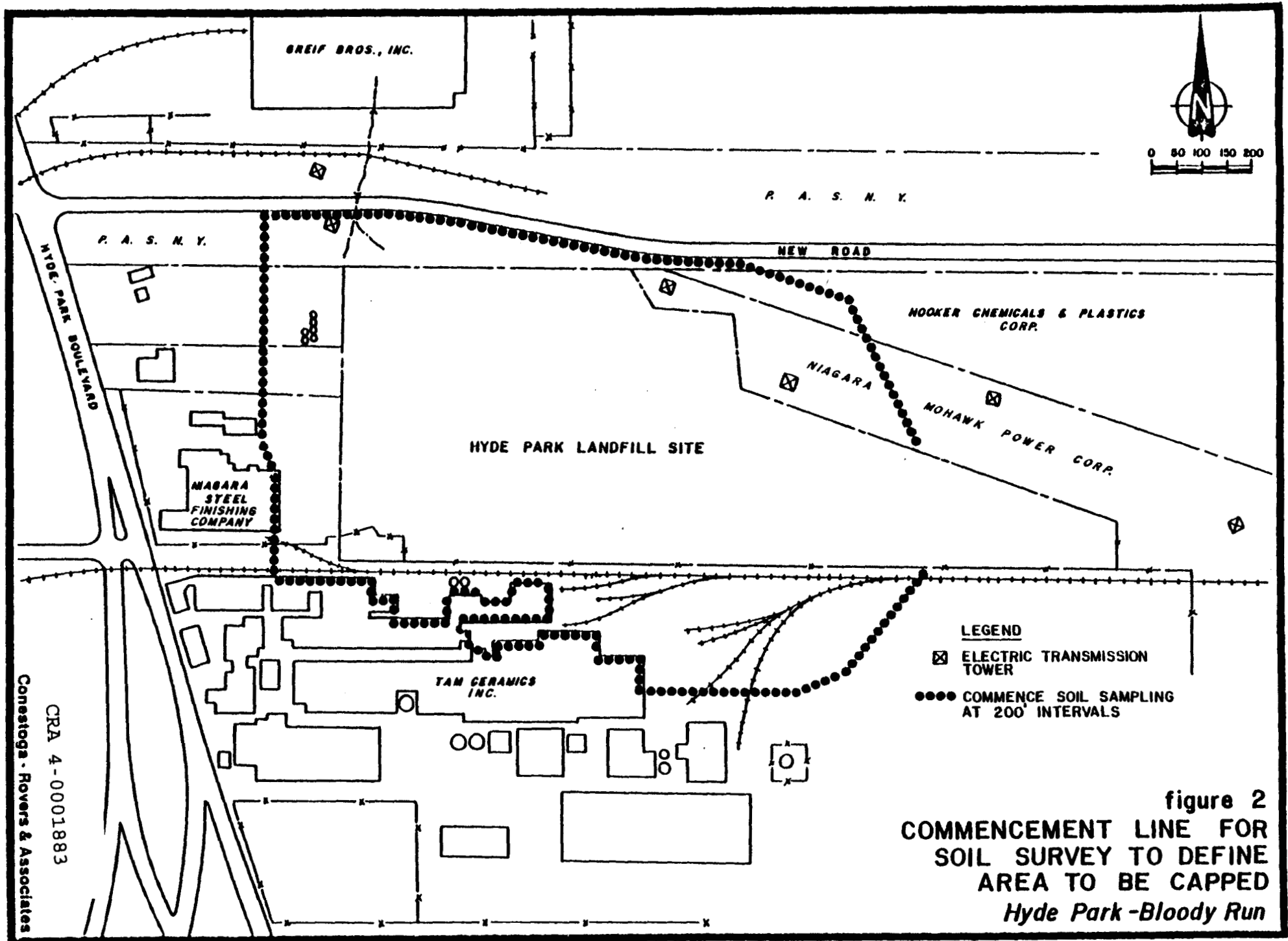
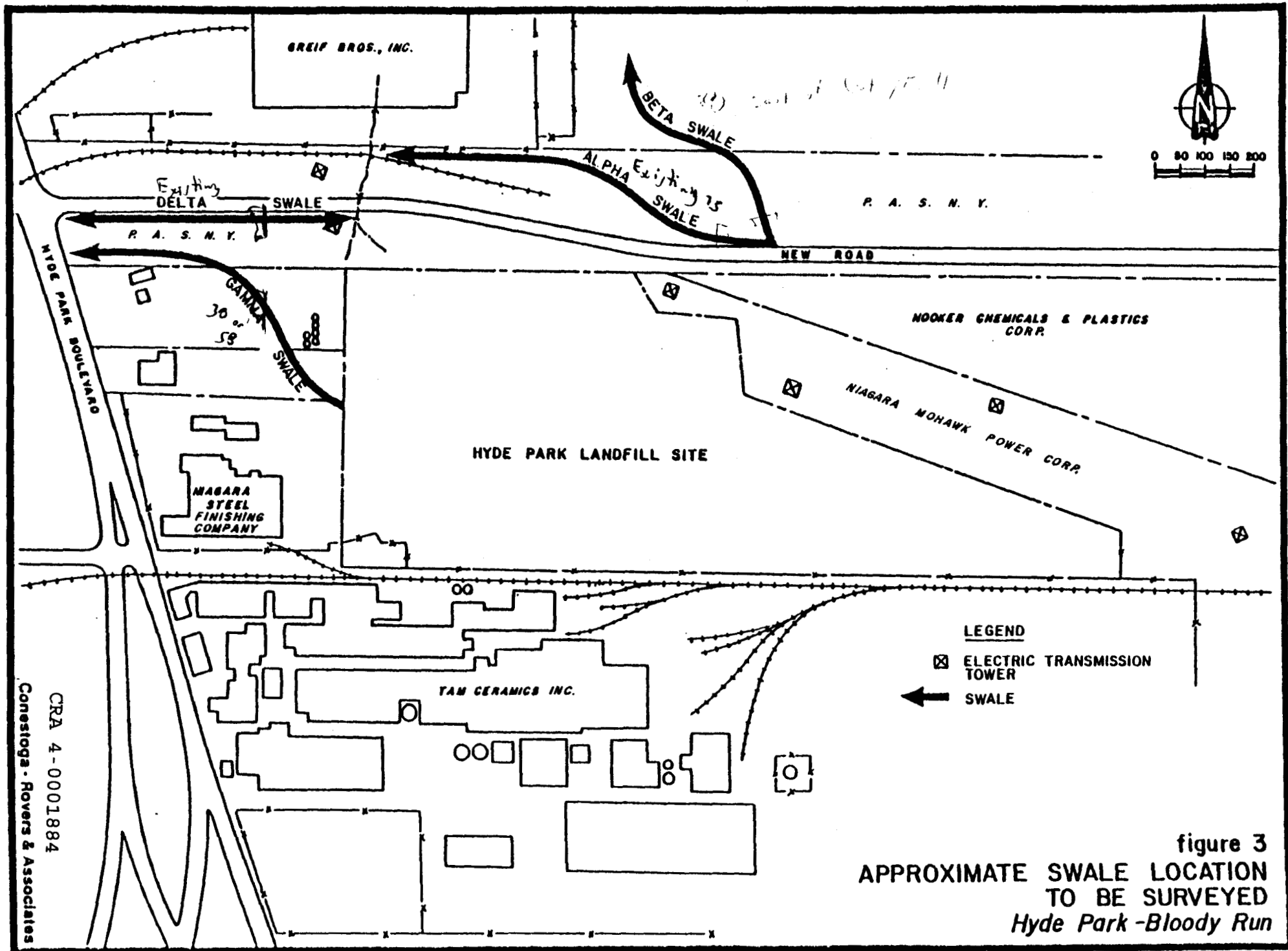
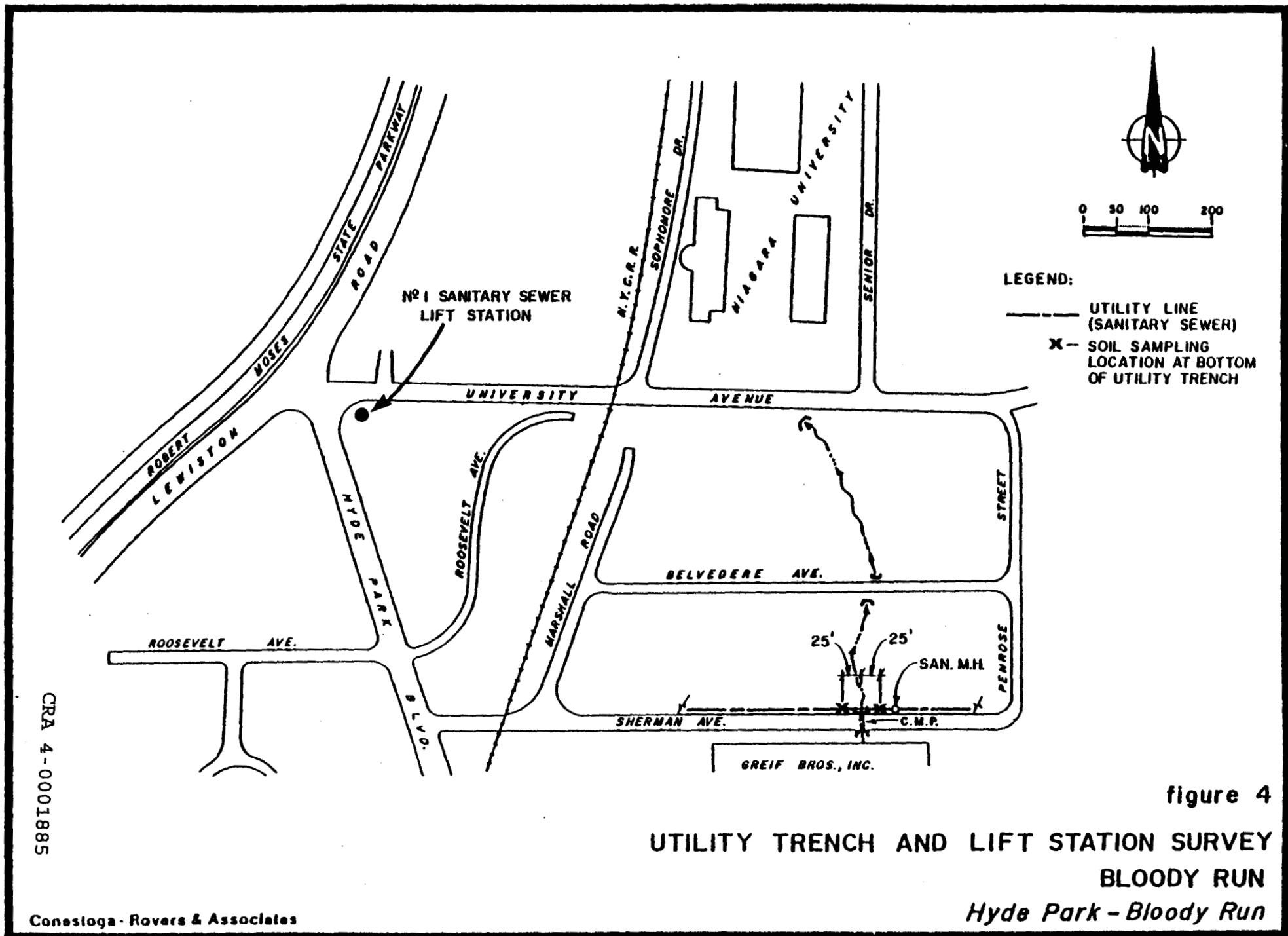


figure 2
COMMENCEMENT LINE FOR
SOIL SURVEY TO DEFINE
AREA TO BE CAPPED
Hyde Park-Bloody Run





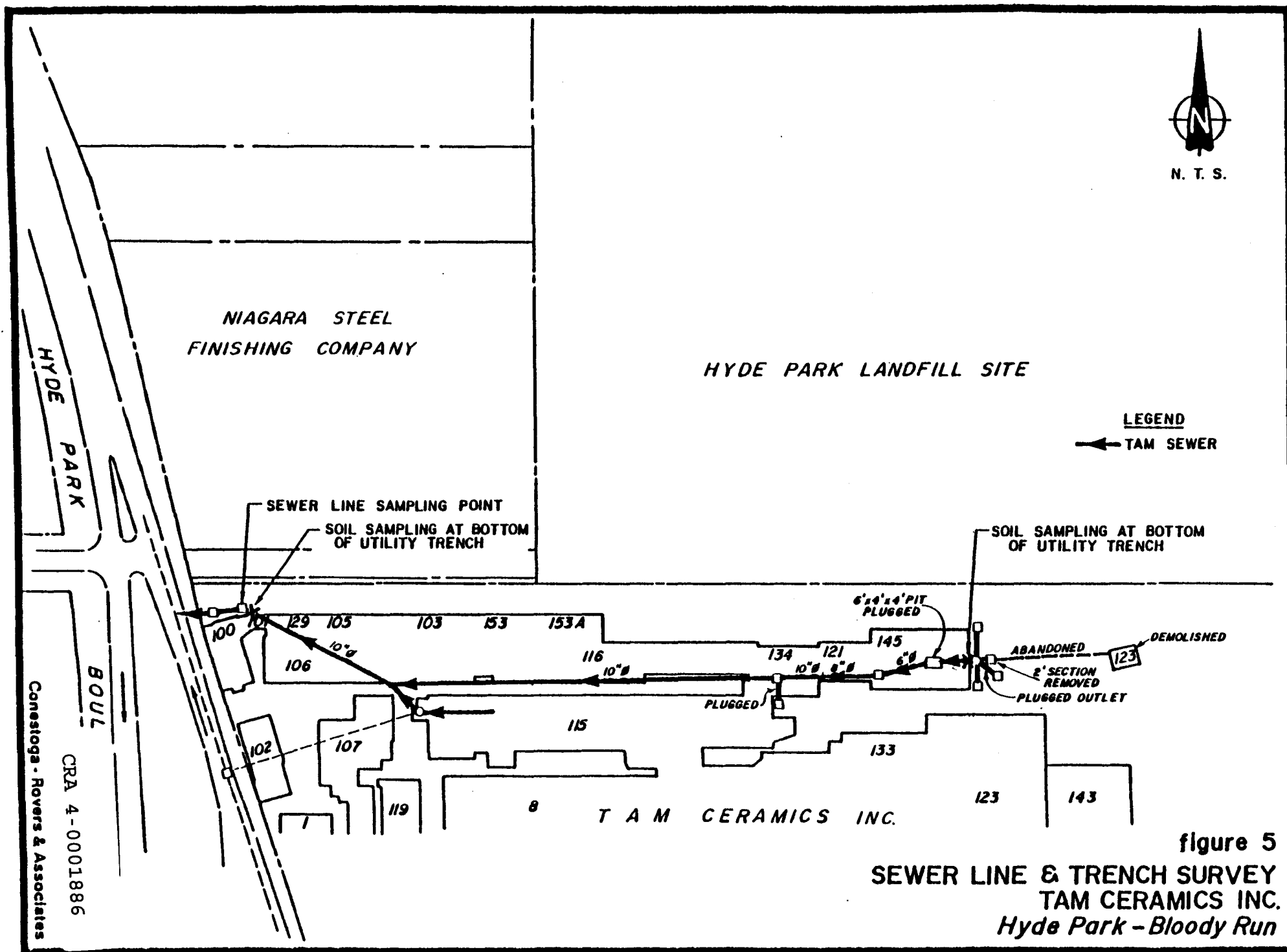
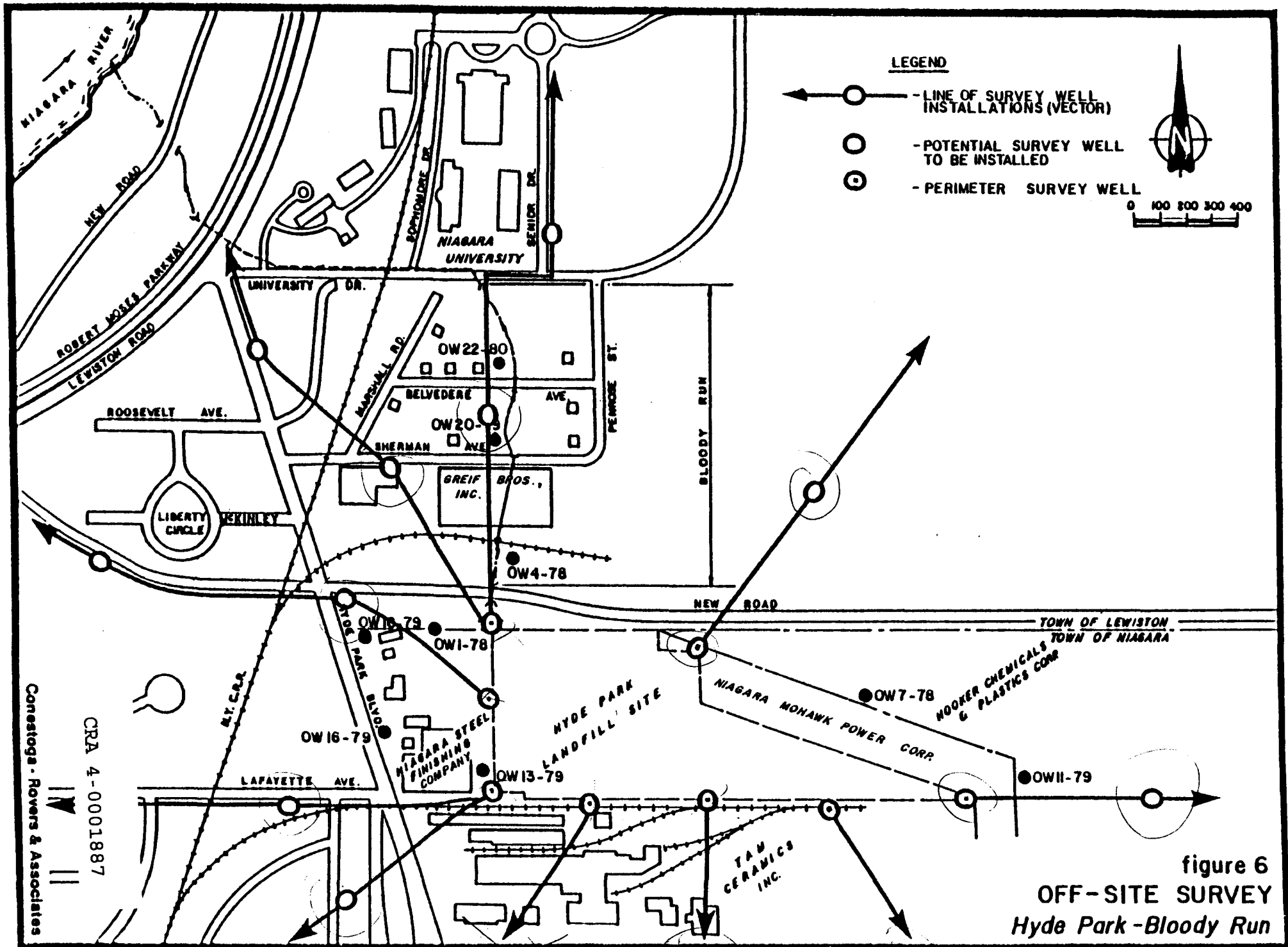
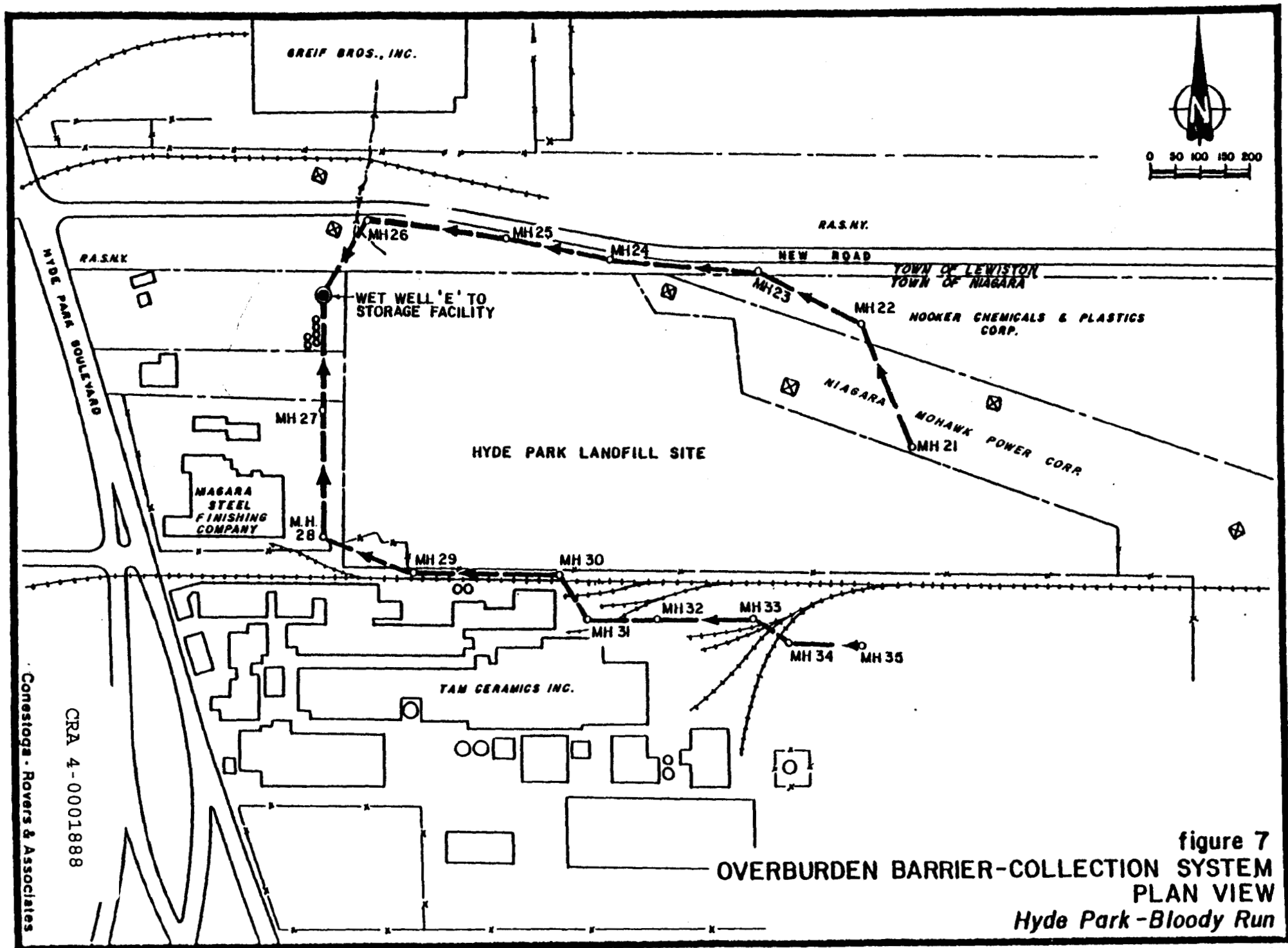
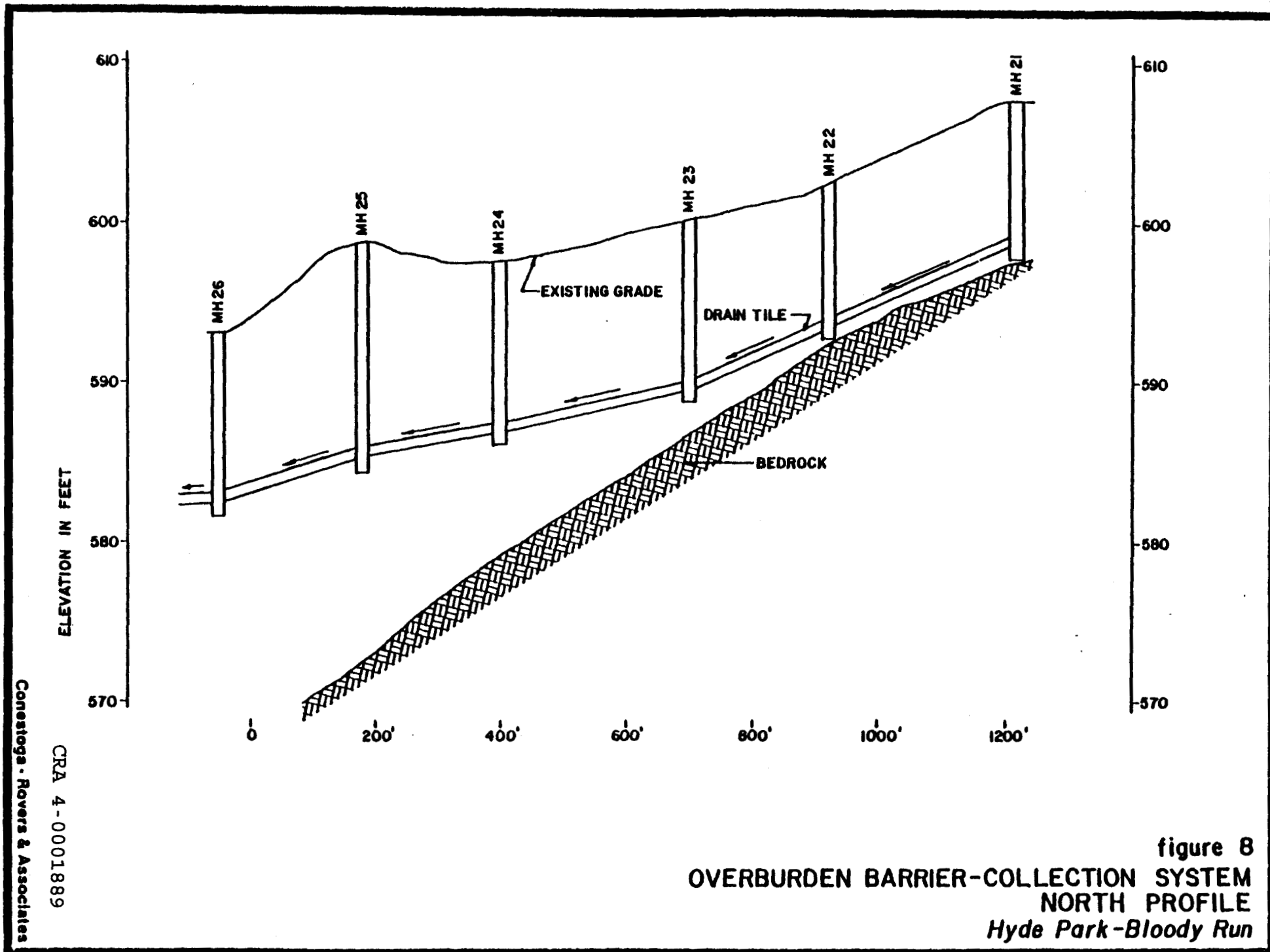
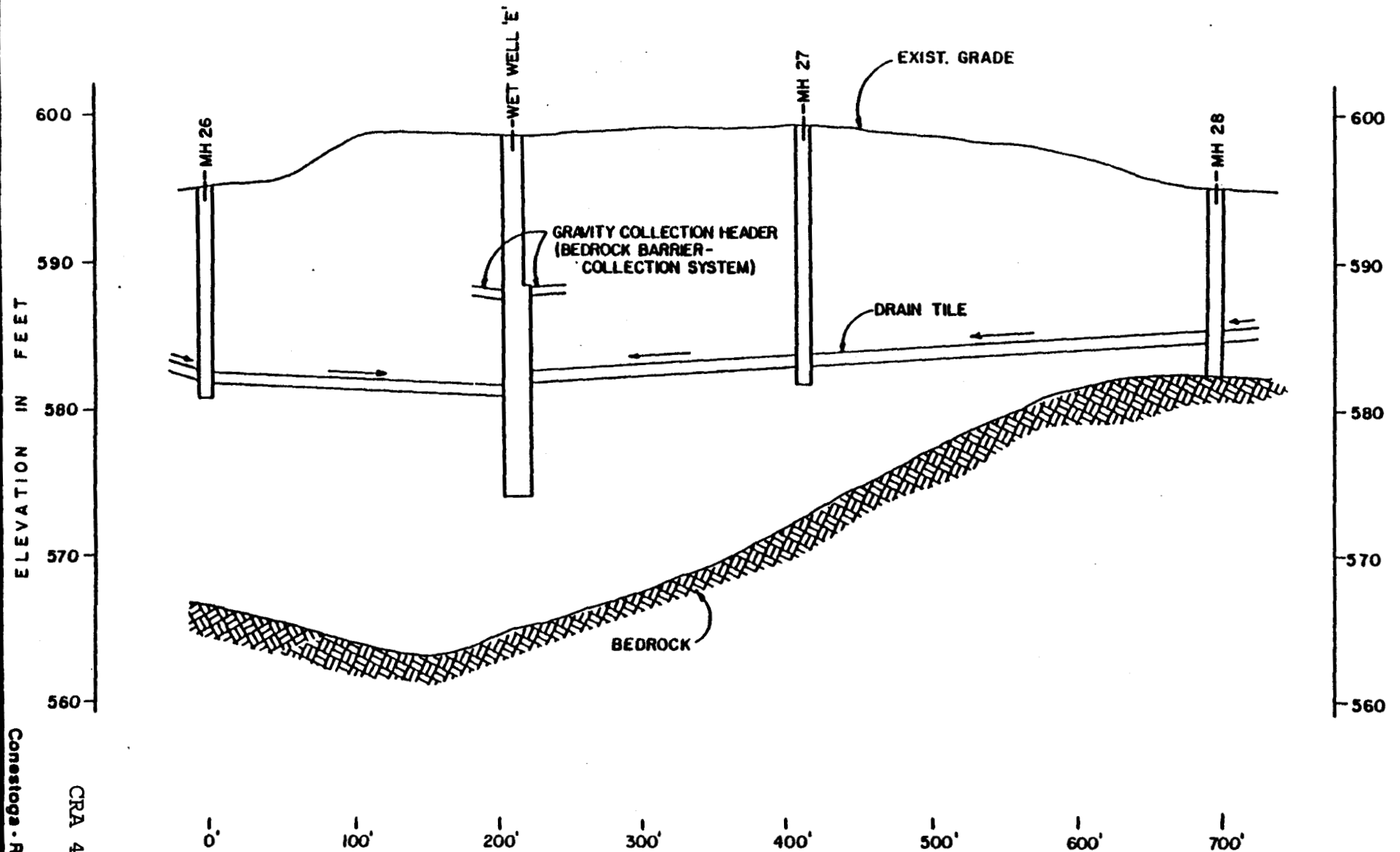


figure 5
SEWER LINE & TRENCH SURVEY
TAM CERAMICS INC.
Hyde Park - Bloody Run









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figure 9
 OVBURDEN BARRIER-COLLECTION SYSTEM
 WEST PROFILE
 Hyde Park-Bloody Run

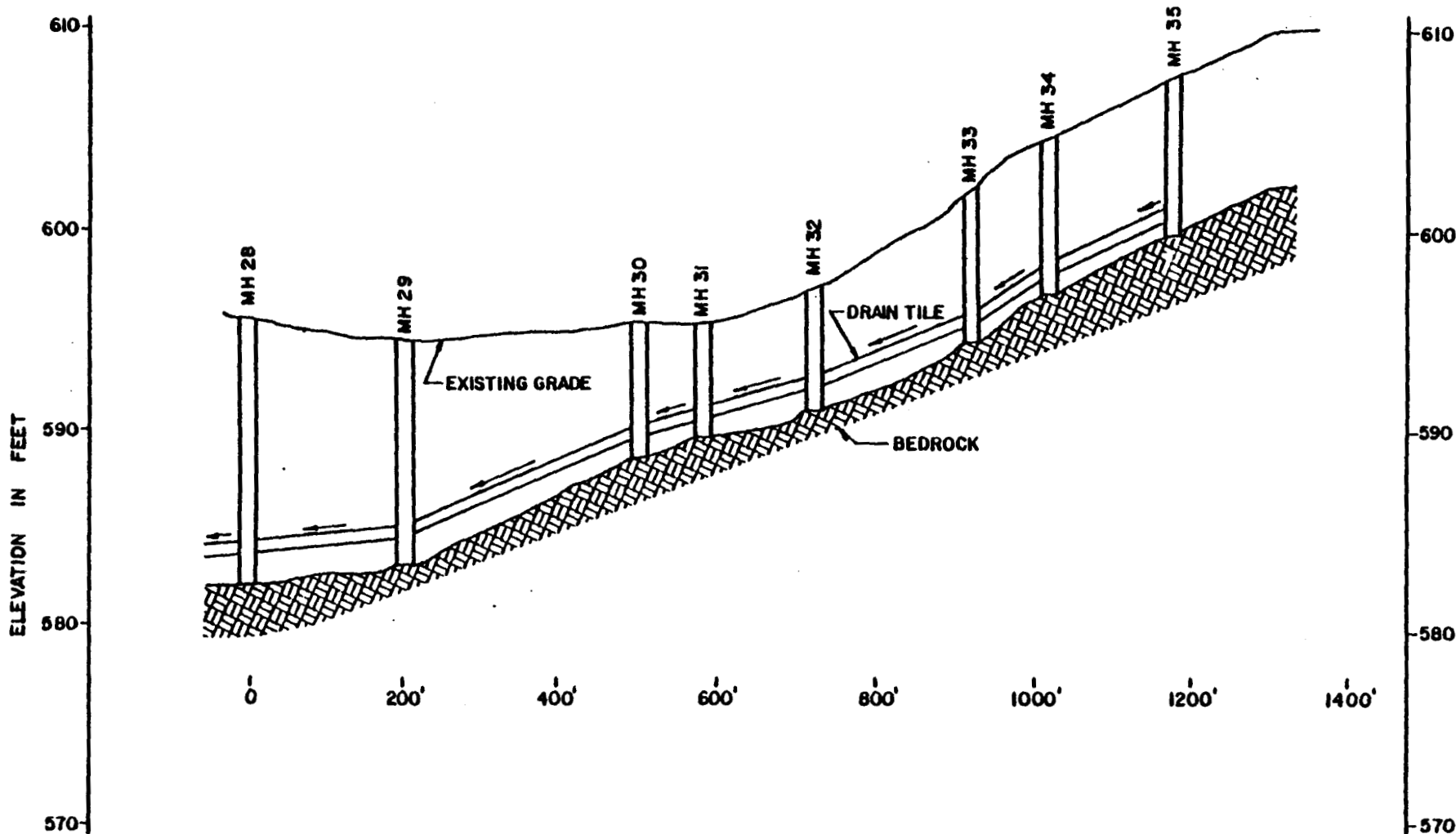


figure 10
 OVERBURDEN BARRIER-COLLECTION SYSTEM
 SOUTH PROFILE
 Hyde Park-Bloody Run

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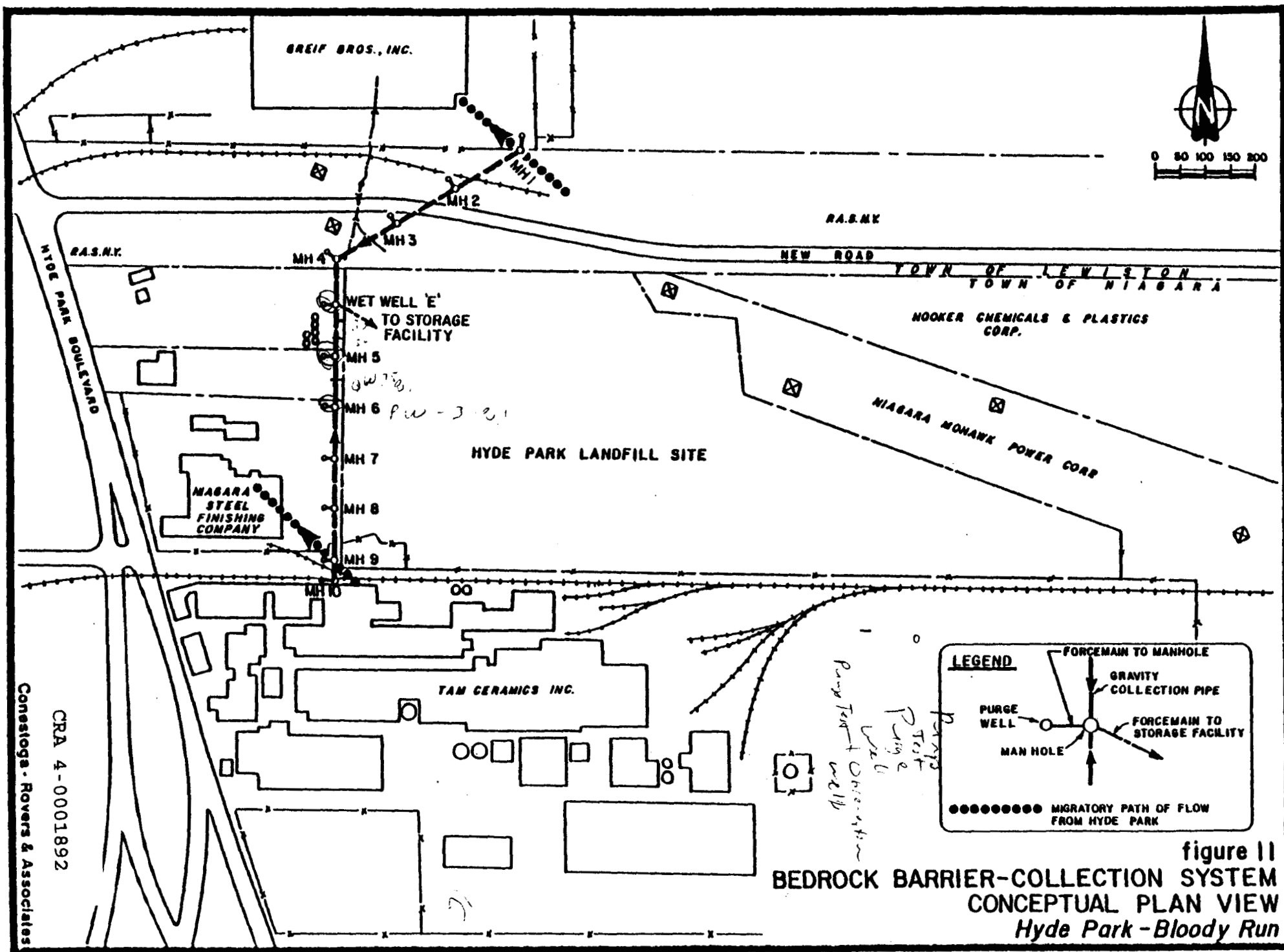
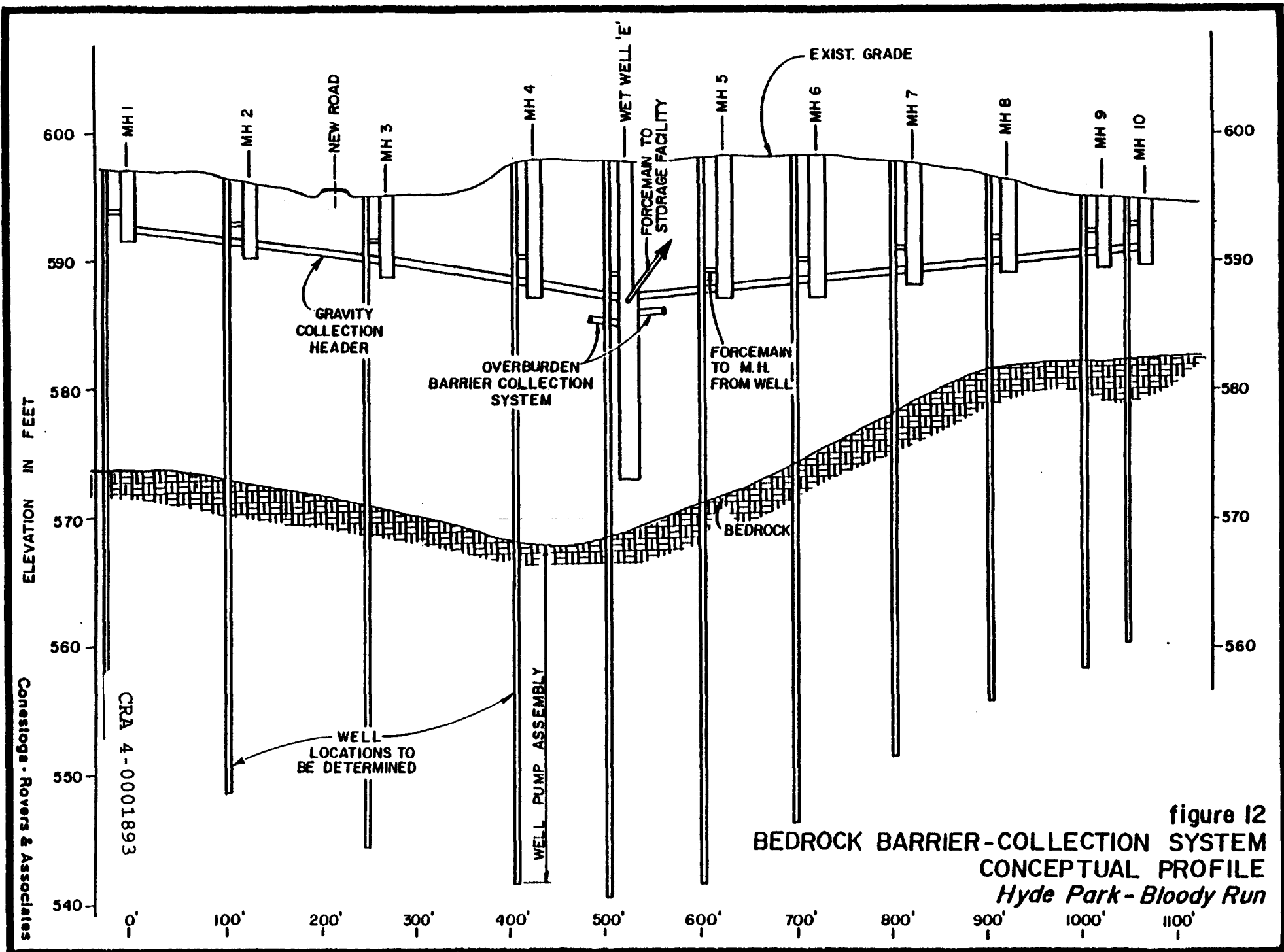


figure 11
BEDROCK BARRIER-COLLECTION SYSTEM
CONCEPTUAL PLAN VIEW
Hyde Park - Bloody Run



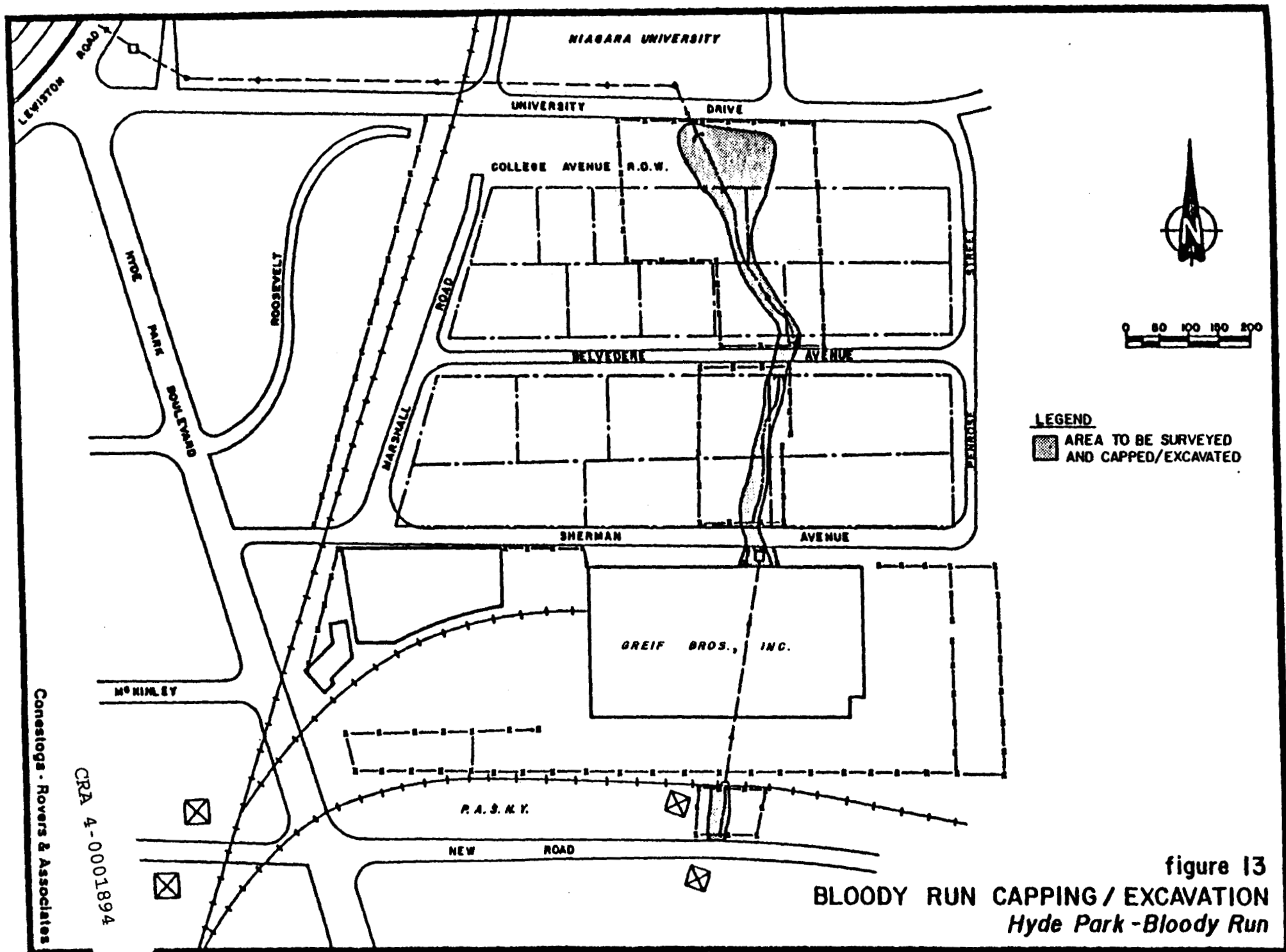
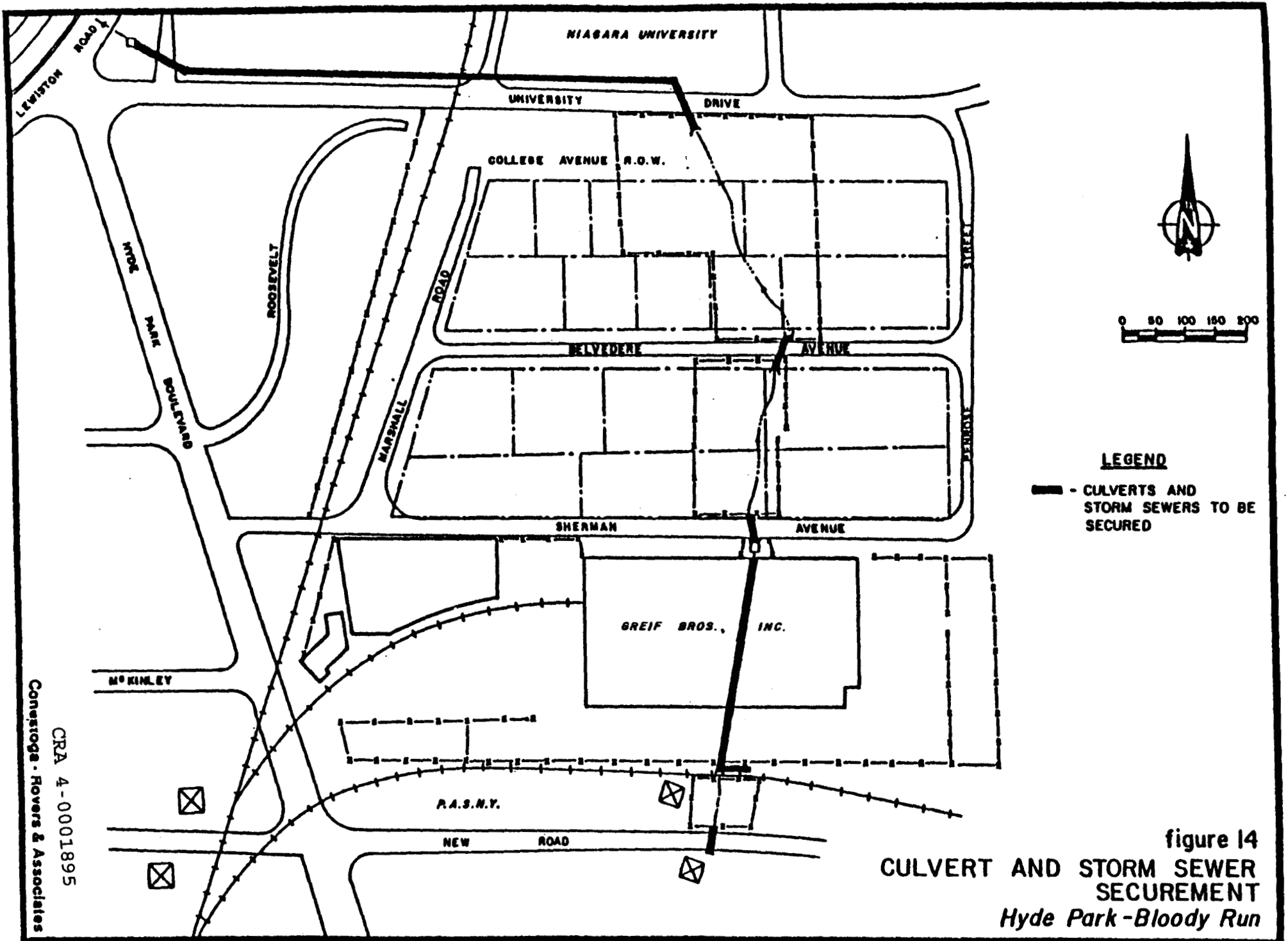
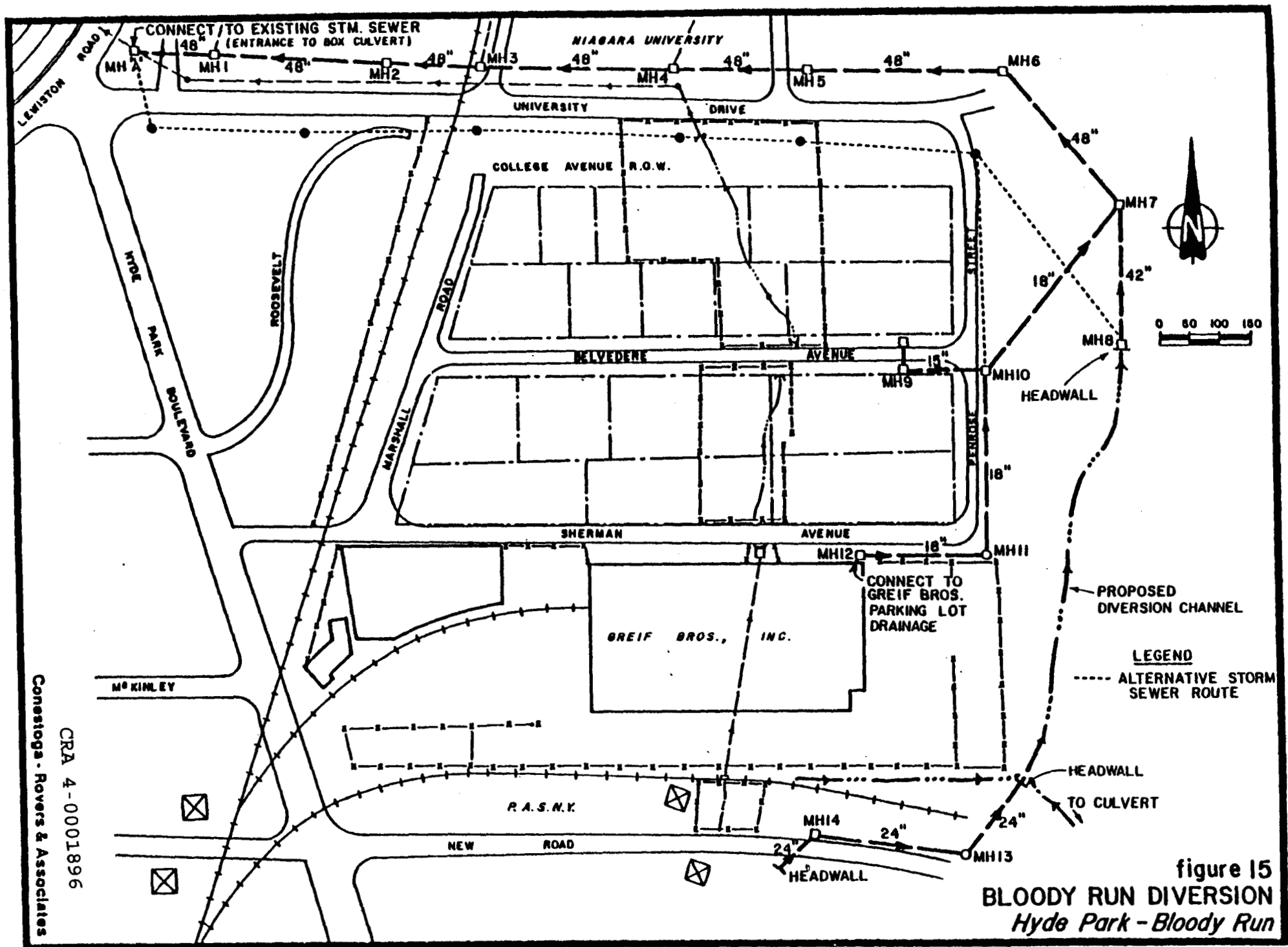


figure 13
BLOODY RUN CAPPING / EXCAVATION
Hyde Park - Bloody Run

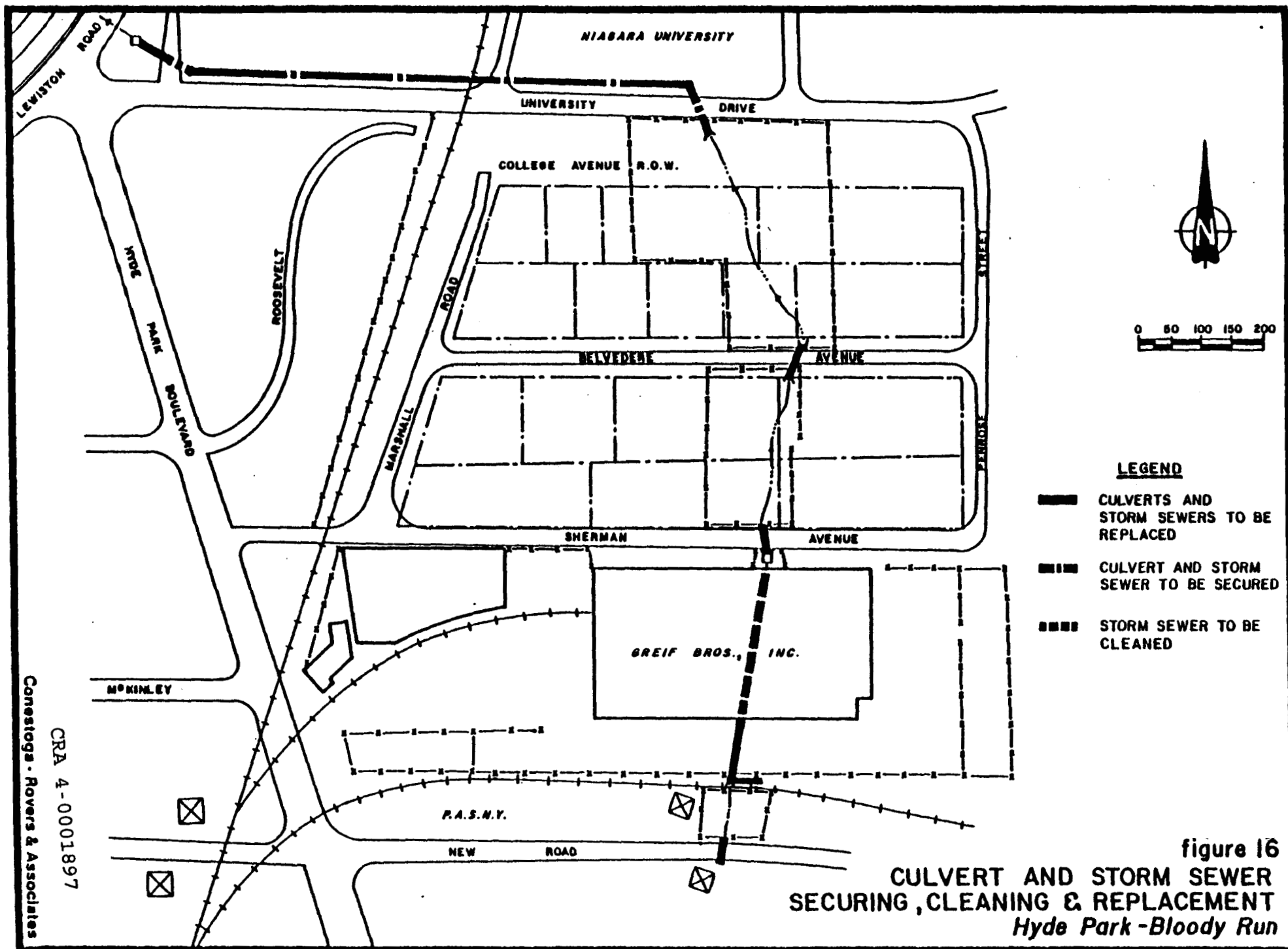


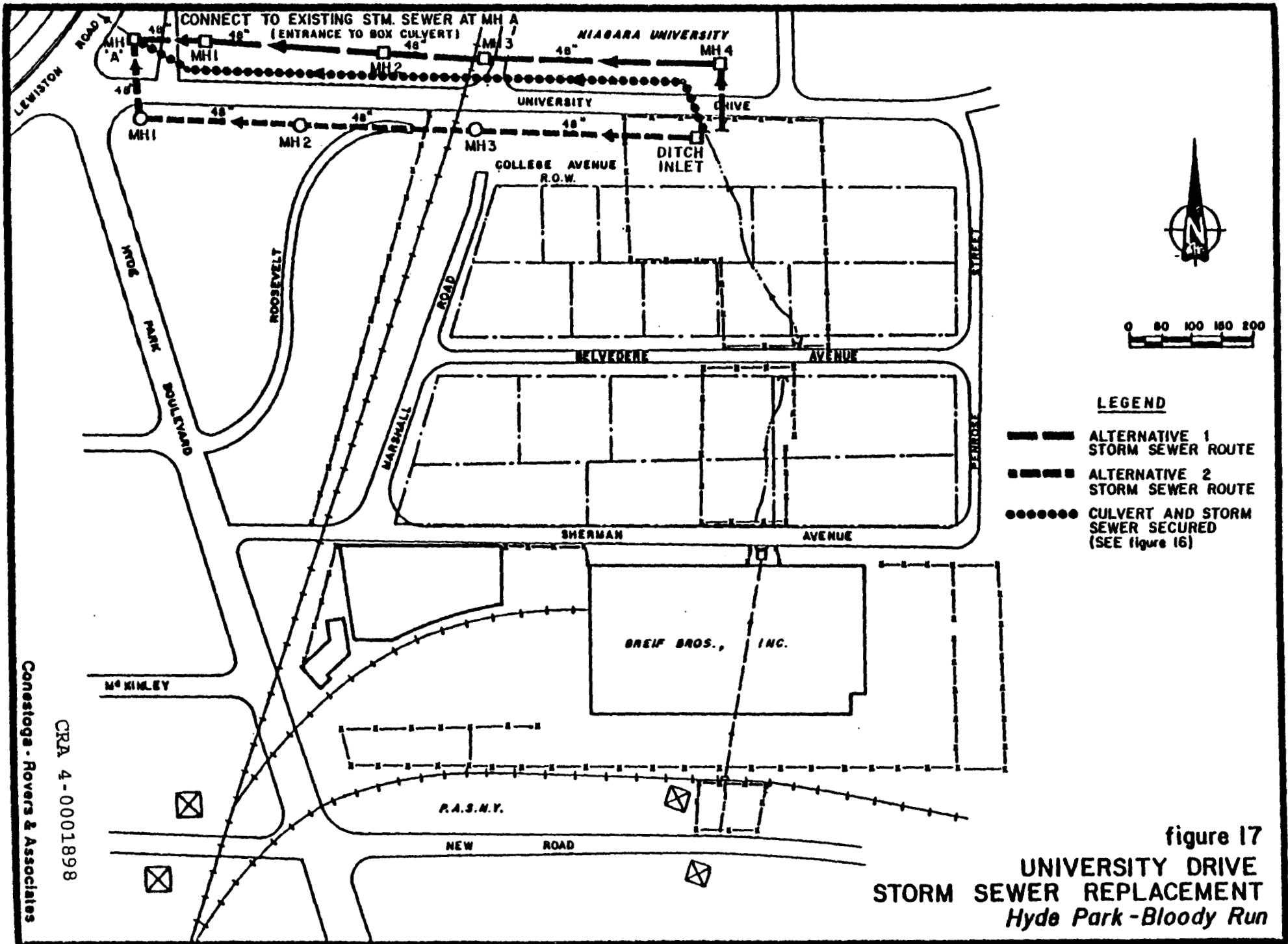
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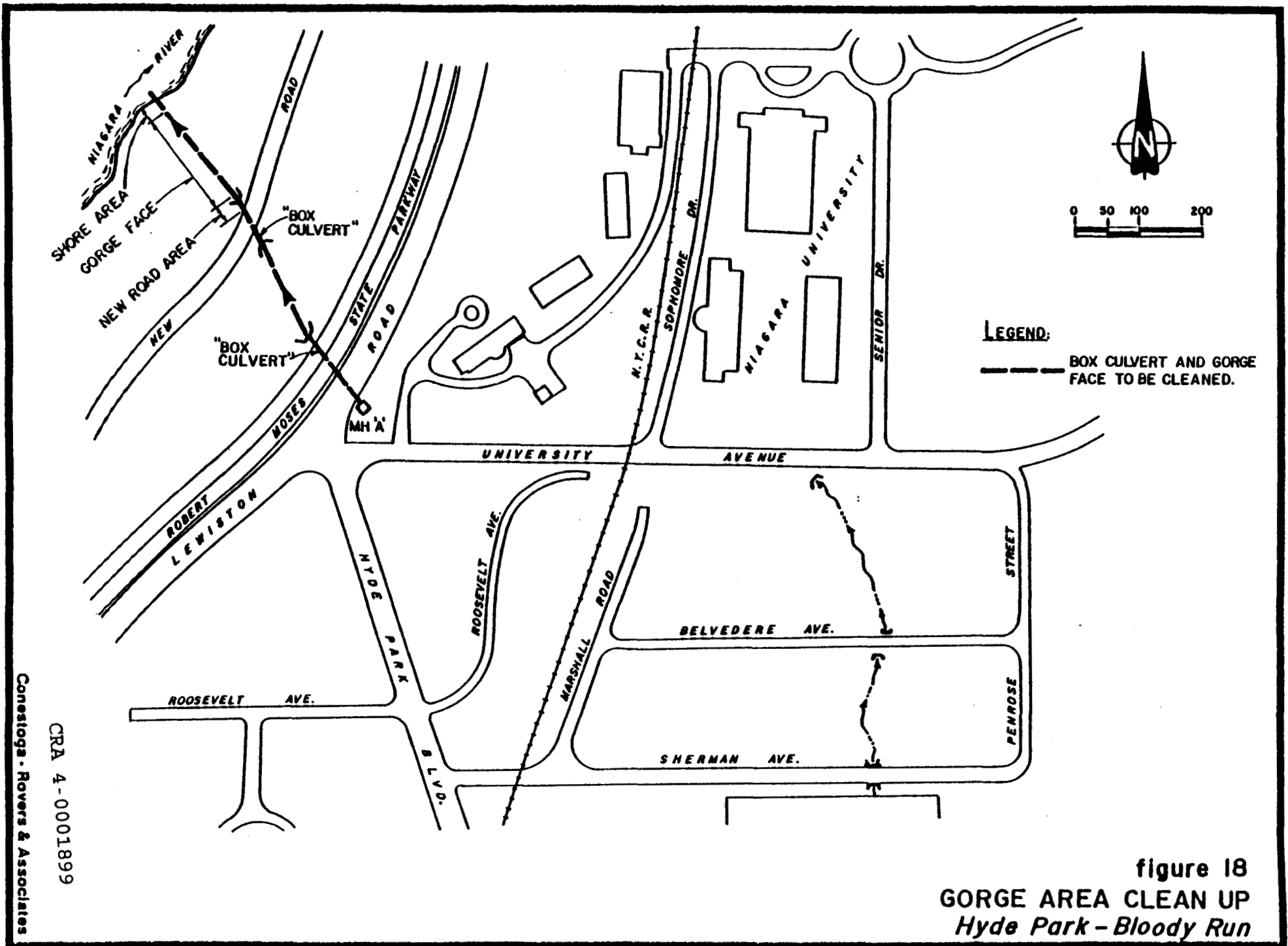


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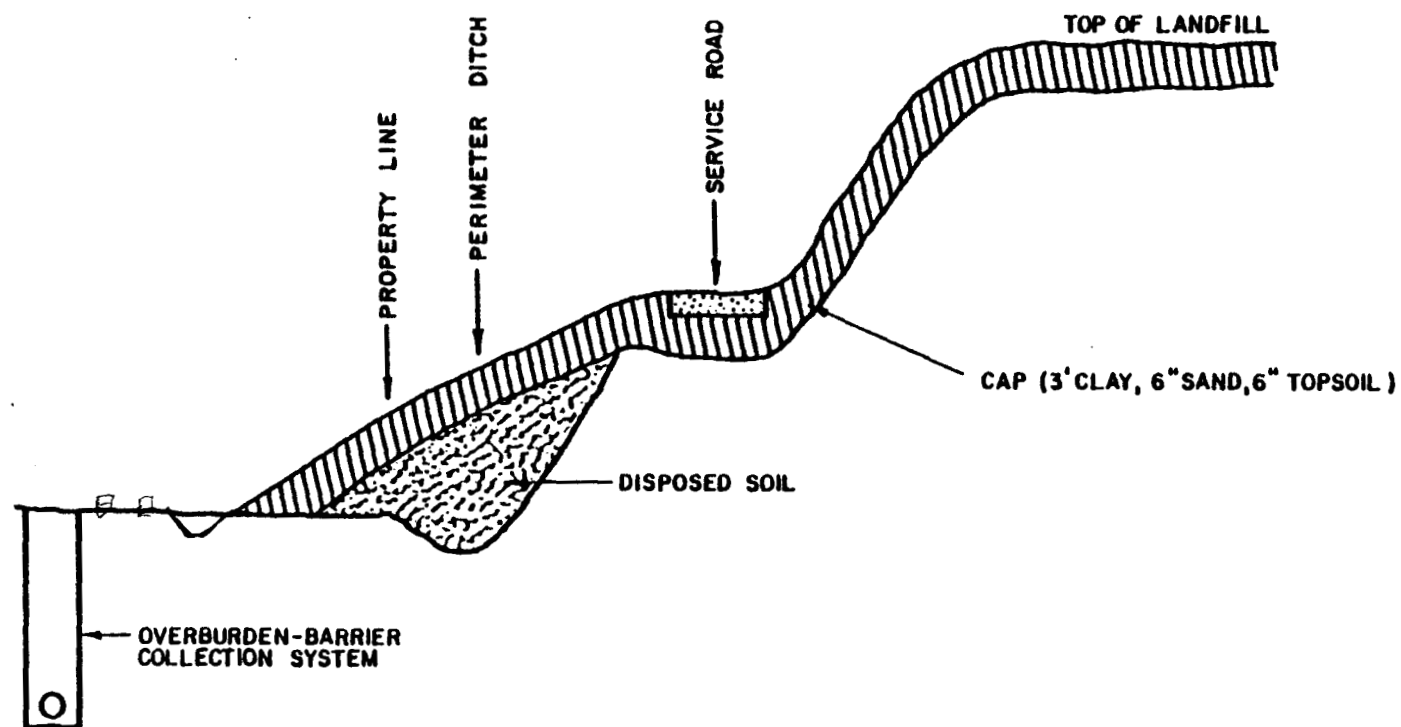


figure 19
TOE DISPOSAL OF EXCAVATED SOIL
Hyde Park -Bloody Run

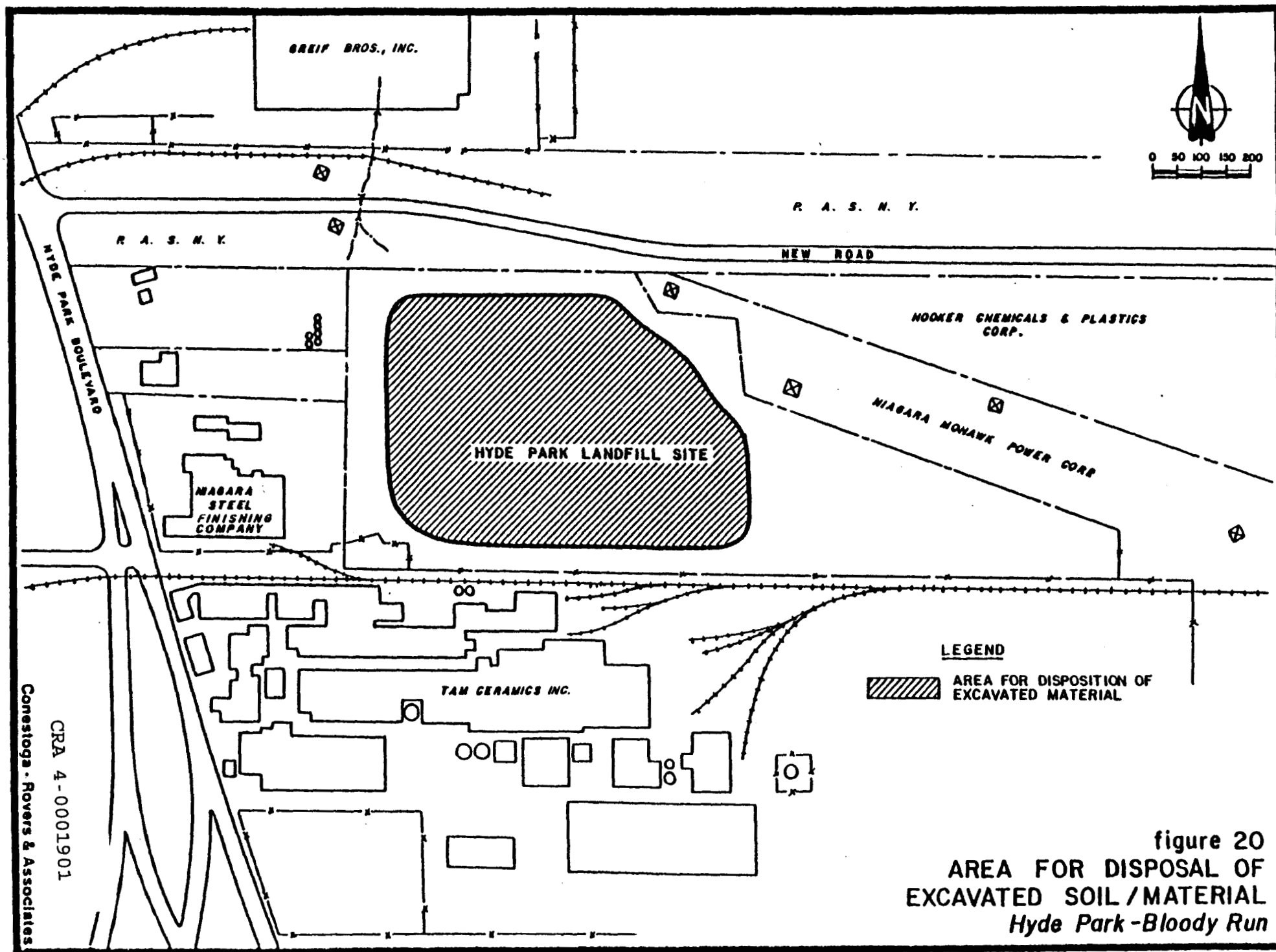
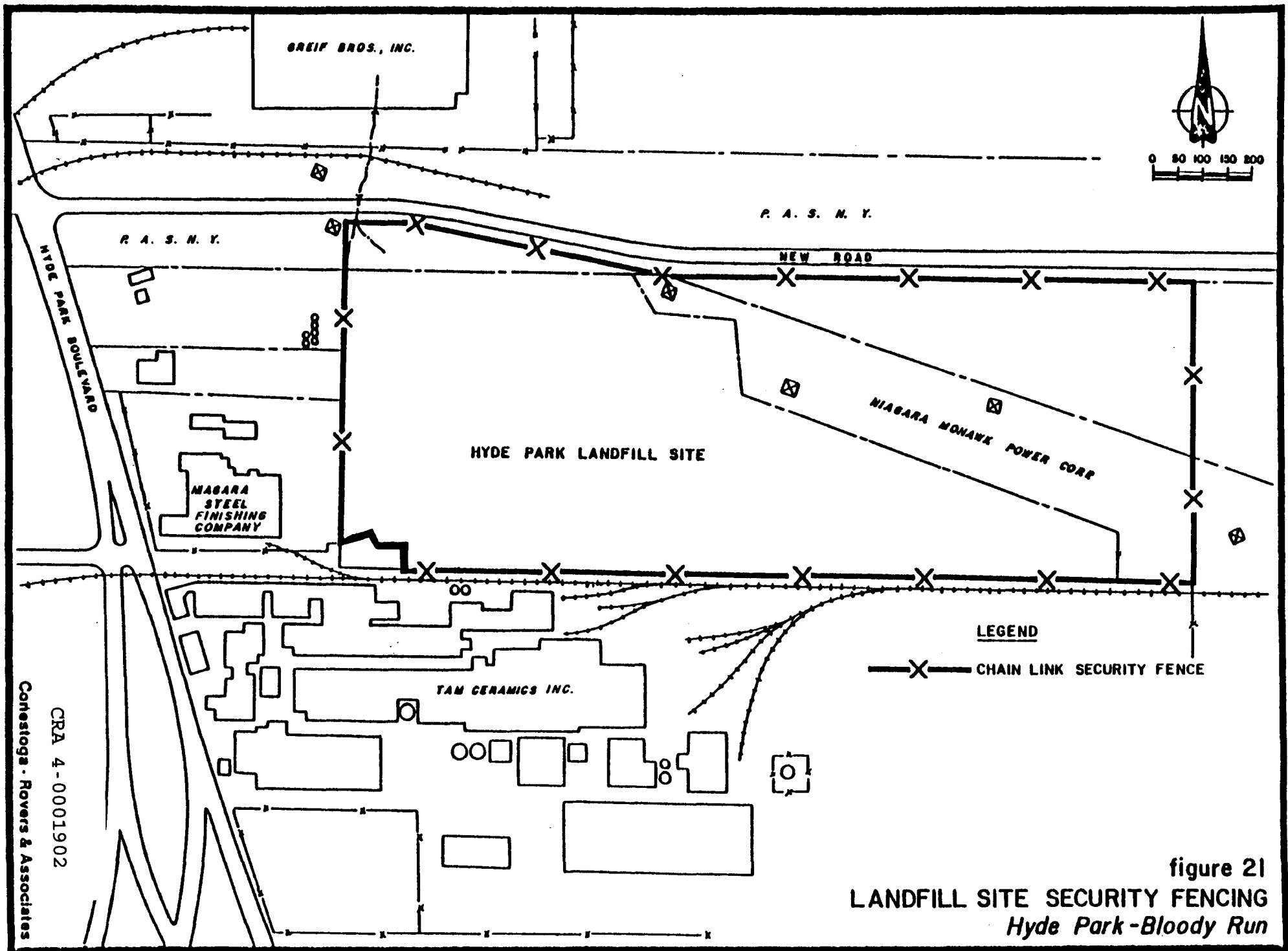
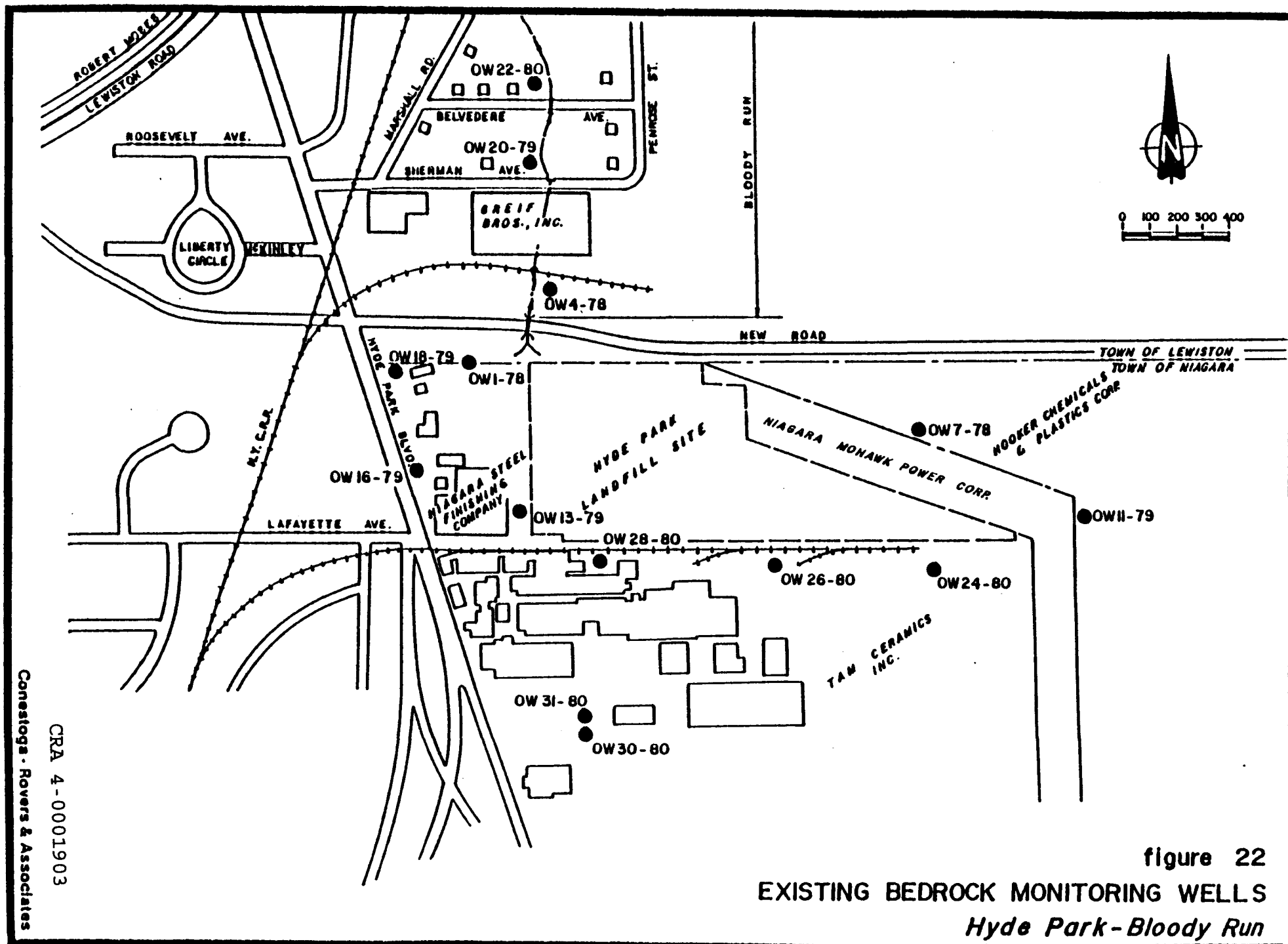


figure 20
AREA FOR DISPOSAL OF
EXCAVATED SOIL / MATERIAL
Hyde Park -Bloody Run





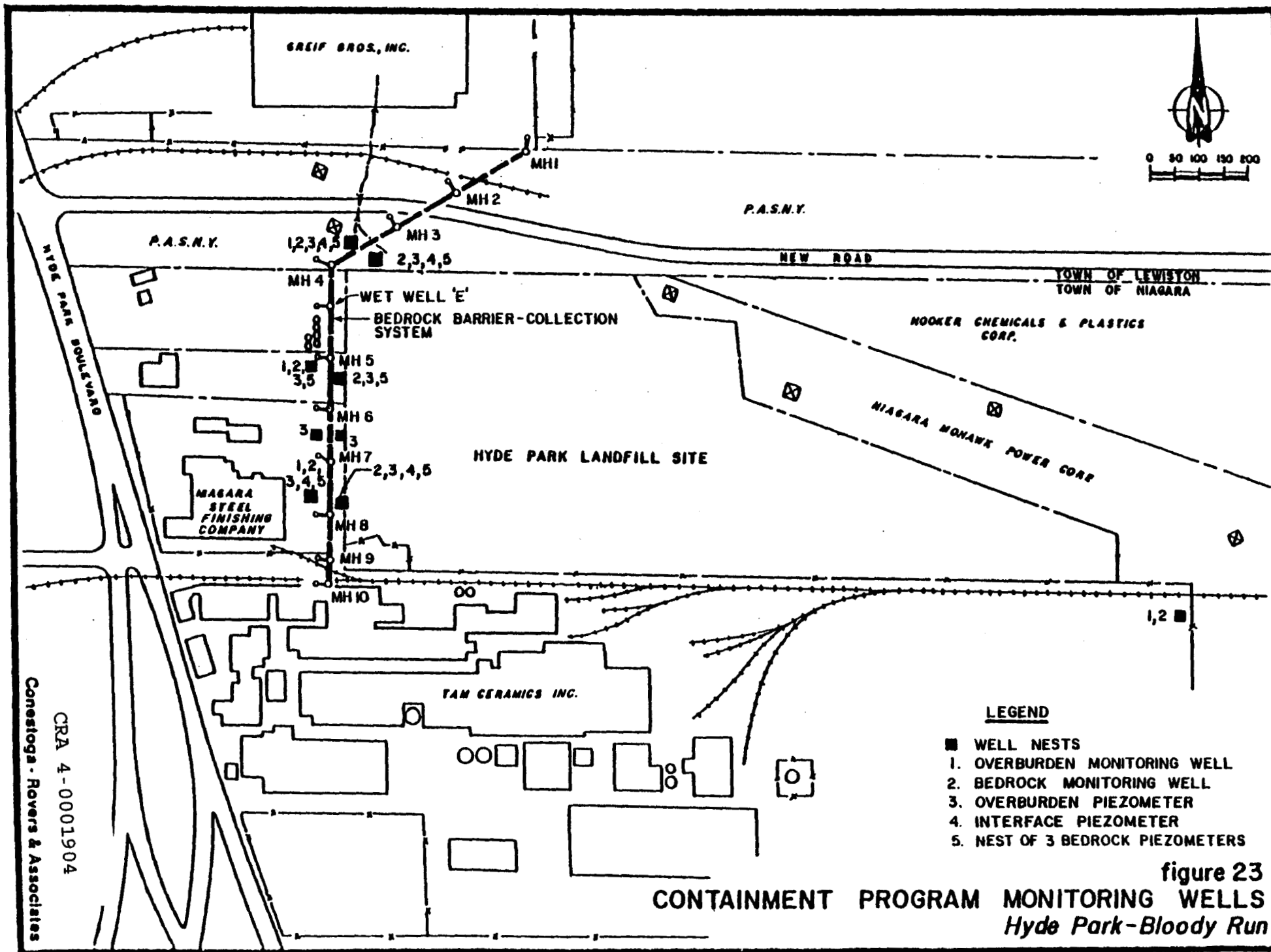
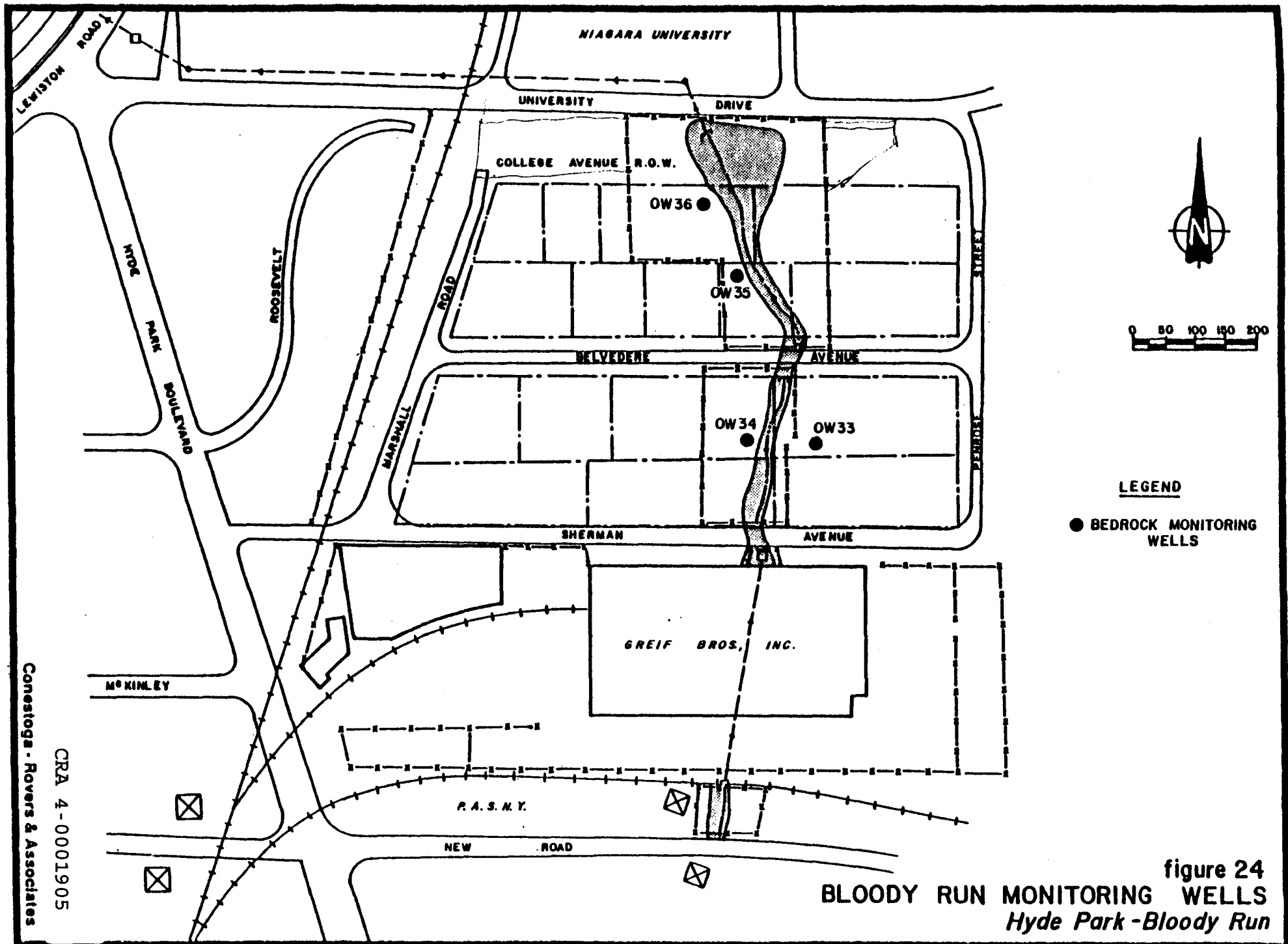


figure 23
CONTAINMENT PROGRAM MONITORING WELLS
Hyde Park-Bloody Run



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